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Problem A: Characteristics of Monroe County Small Woodland Owners and Their Farms; Problem B: Management Practices of Monroe County Small Woodland Owners; and Problem C: Factors Influencing Woodland Management Practice Adoption by Monroe County Small Woodland Owners

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To the Graduate Council:

I am submitting herewith a thesis written by Ray C. Stamey entitled "Problem A: Characteristics of Monroe County Small Woodland Owners and Their Farms; Problem B: Management Practices of Monroe County Small Woodland Owners; and Problem C: Factors Influencing Woodland Management Practice Adoption by Monroe County Small Woodland Owners." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agriculture and Extension Education.

George W. Weigers, Major Professor

We have read this thesis and recommend its acceptance:

John J. McDow, Frank F. Bell, Robert S. Dotson

Accepted for the Council:
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

May 26, 1971

To the Graduate Council:

I am submitting herewith three related problems in lieu of thesis written by Ray C. Stamey entitled: "Problem A: Characteristics of Monroe County Small Woodland Owners and Their Farms; Problem B: Management Practices of Monroe County Small Woodland Owners; and Problem C: Factors Influencing Woodland Management Practice Adoption by Monroe County Small Woodland Owners." I recommend that they be accepted for nine quarter hours credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.

Major Professor

We have read these problems
and recommend their acceptance:

Accepted for the Council:

Vice President for
Graduate Studies and Research

SMALL WOODLAND OWNERS IN MONROE COUNTY, TENNESSEE

PROBLEM A: CHARACTERISTICS OF MONROE COUNTY SMALL WOODLAND OWNERS AND THEIR FARMS

PROBLEM B: MANAGEMENT PRACTICES OF MONROE COUNTY SMALL WOODLAND OWNERS

PROBLEM C: FACTORS INFLUENCING WOODLAND MANAGEMENT PRACTICE ADOPTION BY MONROE COUNTY SMALL WOODLAND OWNERS

Three Related Special Problems in Lieu of Thesis

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

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by

Ray C. Stamey

June 1971

PROBLEM A

CHARACTERISTICS OF MONROE COUNTY WOODLAND OWNERS AND THEIR FARMS

A Special Problem in Lieu of Thesis

In Partial Fulfillment

of the Requirements for the Degree

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June 1971

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CHAPTER I

INTRODUCTION

I. THE SITUATION AND NEED FOR THE STUDY

Tennessee was one of twelve states, and Monroe County was one of five Tennessee counties, participating in a 1962-63 nationwide study concerning the management practices of small woodland owners who owned less than 2,500 acres of woodland. The long-range purposes of the Agricultural Extension Service project were: (1) to determine why small woodland owners were not doing a better job in managing their woodland for optimum productivity, and (2) to try to make an effort to get them to so manage their woodlands that annual board foot production would be doubled by the year 2000 A. D. (based on 1960 average annual production). Foresters have projected demand for forest products and find by the year 2000, if past and present trends continue, the woodlands of the Nation must be in condition to produce almost 104.3 billion board feet annually compared with the 1960 production of 47.3 billion board feet (7).*

The above mentioned production goal of 104.3 billion board feet annually must be attained in a relatively short time (40 years). Doubling production in such a short time can only be achieved if today's

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*Numbers in parentheses refer to numbered references in the bibliography; those after the colon, when they appear, are page numbers.

and tomorrow's small woodland owners, including those of Monroe County, manage their woodland according to modern forest management practices.

Dr. Fred P. Frutchey, Research Analyst, Federal Extension Service; Dr. Robert Dotson, Associate Training and Studies Specialist, University of Tennessee; and Dr. John B. Sharp Extension Forester and Forestry Leader, University of Tennessee, selected Monroe County as one of the Tennessee counties to be included in the study. Forestry is of great importance in Monroe county, and there is interest by County leaders in the improvement of the County's woodland. Because of the opportunity for improving the forestry income and because of the large percentage of land in woodland (60 percent) (11:11), knowing the characteristics of the woodland owners of Monroe County, and the management practices they are now using would be helpful to the Extension Service in planning an educational program in forestry.

II. FACTS ABOUT MONROE COUNTY AND RELATIVE IMPORTANCE OF FORESTRY

Monroe County lies in the southeastern portion of East Tennessee joining Cherokee and Graham Counties of North Carolina on the southeast boundary. Tennessee counties that bound Monroe County are as follows: on the southwest by Polk County; on the west by McMinn County; on the north by Loudon County; and on the east by Blount County. The county consists of 423,680 acres with 141,965 acres being owned by the United States National Forest Service (11:11). The remaining 271,724 acres of privately owned land range in elevation from 800 feet to 4,000 feet above sea level.

Monroe County is approximately 50 miles southwest of Knoxville, Tennessee, and Knoxville is the closest major market area for the County. The county is within 20 miles of Bowaters Southern Paper Mill located at Calhoun, Tennessee.

Monroe became a county in 1819 and the city of Madisonville is the county seat with a population in 1960 of 1,812. Sweetwater is the largest city in the County with a population of 4,145 in 1960. Tellico Plains is the only other incorporated town in the County with a population of 794 (11:16). Vonore is not incorporated; however, it is large enough to be called a town. The total population of Monroe County in 1960 was 23,316.

Monroe County is mainly an agricultural county with an estimated total gross agricultural sales of $5,858,000 in 1962 (11:49). The main agricultural enterprises, listed in the order of their contribution to the agricultural income of the county, have been dairy, tobacco, livestock, field crops, forestry, and vegetables. Major industries at the time of this study included seven clothing factories, one foundry and sheet metal factory, two meat packing plants, eleven small sawmills, five wood processing plants, one church furniture factory, and one canning company plant. In addition to employment in the above factories, Monroe Countians were employed by Alcoa Aluminum of Maryville, Bowaters Southern Paper Mill of Calhoun, and other industries in Loudon, Knox, Anderson, Blount, McMinn, Bradley, and Hamilton Counties.

Due to the number of factory jobs available in the area, many small woodland owners have become part-time farmers. According to the 1960 census the number of part-time farmers had increased to 762 in 1959 (21).

The 1960 census of selected population data indicated that the population of Monroe County was 23,316. The census (1960) indicated that the median school years completed by the population, 25 years and over, was 8, and that 25.8 percent of the adults had completed less than 5 years of school. Only 18.2 percent of the adults had completed high school and more school years. Median family income for the county was $2,745.

The sale of forestry products was an estimated $680,000 in 1962, or 11.6 percent of the total (11:59). The County sold over $600,000 worth of pulpwood alone in 1962. There was an estimated 157,034 acres of privately owned woodland, and this was 60 percent of the total privately owned land.

III. IMPORTANCE OF THE STUDY

From the above mentioned facts it can be seen that Monroe County derives almost 12 percent of its gross agricultural income from the sale of woodland products. United States Forest Service Woodland Management Demonstrations on Monroe County land show that the privately owned woodland could be producing over twice the annual estimated present growth rate. It has been conservatively estimated that Monroe County woodland could produce over $1,000,000 gross sales annually if the landowners would carry out good woodland management practices (11:60).

The most recent national statistics show that 55 percent of all commercial forest land in the United States is held in 4.5 million ownerships of less than 5,000 acres each. These woodlands grow

substantially less timber per acre than well-managed larger private and public ownerships.

The lands owned by many forest industries and by the public already have programs of forest management. They are in the business of forest crop production. Such ownerships are in a good position to command the facilities and personnel necessary for attainment of the greatly increased intensity of management needed. But together, industrial and public lands comprise less than half the commercial forest area in the United States.

Small forest ownerships with 55 percent of the area must obviously be looked to for a substantial portion of the increased growth needed. It is not likely, however, that the small ownerships can be expected to reach the intensity of management that can be expected of industrial and public lands.

Consideration of this indicates that an annual growth goal for small forest ownerships by the year 2000 should be about 52 billion board feet or about 49 percent of the total needed. This is about double what those small ownerships produce now and about 4 billion board feet greater than the current growth from all ownerships in the United States today.

A national forestry survey was conducted in 1962 and 1963 in 12 states to determine the situation concerning the privately owned forest land and the attitudes of the small woodland ownership owners. The objective was to find what could be done to influence small forest owners to double their production by the year 2000 and thereby produce 4 billion board feet more than the present production of all owners (5).

As a part of a national forestry survey conducted in 12 states in 1962 and 1963, Extension staff members in five Tennessee counties (including Monroe County) interviewed a total of 425 randomly selected small woodland owners. One hundred of these were interviewed in Monroe County, Tennessee. Answers to eight questions were sought in that study. They were as follows:

1. What motivates small woodland owners to use or not to use good woodland management practices?

2. What are the characteristics of small woodland owners? How do owners who use good forestry practices differ from those who do not?

3. What is the size of their forest and non-forest farm acreages?

4. In what stages are they in the adoption of recommended forestry practices?

5. How many small woodland owners are already making satisfactory use of their woodlands? How many others could and should?

6. To what extent are they aware of and using good forest management practices?

7. To what extent have they used technical help to improve forest land, also including ASC payments and soil bank?

8. What can be done to influence the owners to use better woodland management practices?

The Agricultural Extension Service Agents in Monroe County are responsible for the development of an educational program in forestry, as well as in all other agricultural enterprises of importance in the

County. The above facts indicate that forestry ranks high in importance in the County economy; thus Extension workers should focus their attention and concern on educational programs dealing with improvement of woodland management practices.

IV. QUESTIONS TO BE ANSWERED

Basic questions raised for consideration in this study included:

1. What are some of the characteristics of small woodland owners of Monroe County?

2. What are some of the characteristics of the innovators (those among the first few to adopt recommended practices) in Monroe County?

3. What are some of the characteristics of the non-innovators (those not among the first few to adopt the recommended practices) in Monroe County?

4. What are some of the characteristics of their farms?

V. PURPOSE OF THE STUDY

The purpose of this study was to obtain basic information about small woodland owners of Monroe County so that the Agricultiral Extension Service Staff could use this information in planning an effective educational program in forestry.

VI. REVIEW OF RELATED LITERATURE

A large number of publications and other literature relating to the characteristics of small woodland owners was available for this study.

Importance of Small Woodlands

Worley (18), in discussing the local benefits from timber industry expansion, said the average size of woodlands is one of the major problems confronting foresters today. Low productivity and lack of management seem to be much more prevalent on small holdings than on large. Why is this? The answer to this question lies more with the people owning the woodland than with other possible causes. The first step in solving the small woodland management problems is to find out more about the owners--learn who they are, how they live, and what they think.

The American Forest Products Industries, Inc. (1:1), in a report of the proceedings at its National Farm Woodlot Conference in 1953, stated that small forests are now and will continue to be a large and important part of this country's forest economy. Fifty-seven percent of the commercial forest land on which Americans rely for wood products essential to our way of life is in small woodland ownerships.

The report also stated that woodlot owners would be better off and the prosperity and stability of their communities would be enhanced by a higher level of production from the small woodlands (1:4).

Rose (15), in discussing the relationship of timber and wood production to the development of an area, said that the public interest requires an increasing output from government and privately owned woodlands and protection of the watersheds they cover (15:1). The contribution of forestry, as in many agricultural industries, does not stop at the time of harvest. The stumpage value received by small woodlot owners for sawtimber and pulpwood represents only a small

proportion of this contribution. Sawmills and other services provide employment for large numbers of local people.

Rose also noted that there were more than 4.5 million separate holdings of private forest land in the United States in 1960, plus thousands of tracts less than three acres in size. Three and nine-tenths million tracts of this total area were smaller than 100 acres.

In an Iowa State University press release, Lionberger (10:101) stated that since the size of the farm is nearly always positively related to the adoption of new farm practices, the most difficult problem confronting foresters is that of promoting good practices by the timber land owners with holdings of 10 to 500 acres in size. It was noted in the proceedings of the 1953 Farm Woodlot Conference (1:5) that four-fifths of the small forest tracts had less than 100 acres and 98 percent were less than 500 acres. Reynolds (9), writing in a Southern Forest Experiment Station paper in 1948, noted that in the South there were only 219 large ownerships with a total of 23 million acres, contrasted to the 1,650,000 smaller ownerships, which control 122 million acres of forest land. Seventy-four percent of the cutting on these small holdings was poor or destructive (13:1).

Successful business managers also tended to be good woodland managers, according to Frutchey (6). His 1961 report on research done with small woodland owners indicated that the better managers generally sought and used technical assistance in all of their business affairs, not only in forestry matters. He further noted that woodland owners who improved their economic status during the 1950's tended to be more successful business managers.

Frutchey stated that the successful forest manager apparently was the type of person who was interested in civic affairs. There is a strong correlation between management success and participation in community affairs.

In his study of small forest ownership in the urban fringe area of Michigan, C. H. Schallau (17) found that an owners decision to cut his timber in a poor manner may have been economically rational or the result of lack of knowledge or other factors. With regard to the value of formal education, Frutchey (6) stated that good managers generally had more schooling than poor ones.

John D. Black (3:434), in his paper before the American Philosophical Society in 1945, pointed out that one of the major obstacles to better forestry in this country was the lack of public concern and the indifference of woodland owners. Education must find something in the attitudes and reactions of people at large, and of timberland owners, that they can seize upon that will draw these groups into their forestry programs.

The age of land owners also has been seen to influence their opinions concerning woodland practices. The saying "old dogs can be taught new tricks" may be true, however, Lionberger (10:17) in a study of practice adoption found older farmers, on the average, tended to make fewer changes in farming and to be less receptive to change than younger men. In a 1963 study of the motivations of small woodland owners in Kentucky, Santopolo and Newman (16) discovered that the more efficient small woodland owner and those he influenced were in the middle aged (40-59 years) group as compared to their neighbors who

were generally not following recommended forestry management practices.

In a summary statement concerning the characteristics of small woodland owners, Santopolo and Newman also noted that apparently, based on Kentucky data, forest innovators were much like other innovators when compared with their neighbors and others. Innovators tended to be better educated, had higher-status jobs, made more money, and had more land.

Fred P. Frutchey (6) stated that there were many indications that low-income and financial difficulties were the main reasons for unsatisfactory management of small woodlands. He reported that information, interest, and good intentions did not insure good cutting practices by the low-income small woodland owner who lived from one financial crisis to the next. With regard to finance, Herbert F. Lionberger (10:100) has stated that high farm income nearly always is associated with high farm practice adoption levels.

Sharp and Dotson (18:14), in their 1963 study of "Motivations of Small Woodland Owners in Tennessee Concerning Woodland Management," noted that innovators had more gross income and consequently more capital to allocate for forestry and other production.

Frutchey (6) in his study mentioned above found that the basic motive in good forestry management was pride of ownership and interest in productive land management as a longtime family enterprise. Woodlands still in the hands of the original owners were being managed better than those that had changed hands. People who retained ownership for 20 years or more were using more recommended practices

in managing their woodland. Individuals who inherited their property showed slightly more interest in recommended woodland management than those who purchased land.

Frutchey (6) in his study mentioned above noted that interest in better forestry practices appears to be associated with the proportion of an owner's land that is in woodland. The land owners with the largest proportion of land forested had the greatest interest in forestry management. Owners who received the greater portion of their income from their woodlands did a better job of management. Woodlands that provided only a small portion of the total income received less attention and less effective management and were not considered as important as other crop and livestock enterprises.

VII. DEFINITION OF TERMS

For the purposes of this study, an innovator was defined as a farmer who was considered by a panel of judges to be among the first few to accept and carry out recommended farm practices. Non-innovators were farmers who were not among the first few to accept and carry out recommended farm practices. A small woodland owner was considered to be an owner who owned more than five acres and less than 2,500 acres of woodland.

VIII. METHOD AND PROCEDURE USED

In order to gather data for this study a woodland management survey was used to interview 100 randomly selected small woodland owners in Monroe County. A questionnaire or interview schedule was developed

with the help of the Tennessee Agricultural Extension Service Methods Department, the Agricultural Extension Forestry Department, and the University of Tennessee Agricultural Economics Department. The interview schedule included 45 questions which were developed to help answer the foregoing mentioned eight original questions listed for the national forestry survey concerning woodland management in Monroe County.

A list of farmers in the County was obtained from the County ASC office, and the list was divided into innovators and noninnovators. The survey sampling of the County was to interview 100 farmers from the County to be arranged as follows: 25 innovators and 75 non-innovators.

The farmers were classified as innovators or noninnovators by a committee including the SCS technician, FHA supervisor, and the County Agent. The innovators were those farmers who would be classified in the upper 50 percent of the farm populations as to early adoption of recommended agricultural practices. There were 304 innovators listed in the County. All the rest of the farmers were listed as noninnovators indicating that they would be slow about adopting improved agricultural practices. There were 2,025 farmers included as noninnovators in the County.

The farms to be interviewed were determined by taking every "Nth" name on the innovator list, making a total of 25, and every "Nth" name on the noninnovator list, making a total of 75 noninnovators.

The interview schedule was taken to the innovators, and/or non-innovator, by the Extension Agent who asked the questions and recorded the answers. All 25 innovators and 75 noninnovators were interviewed.

Reference may be made to the interview schedule by turning to Appendix A. Interviews were completed in the Spring of 1963.

CHAPTER II

FINDINGS OF THE STUDY

I. DEGREE TO WHICH INTERVIEWER KNEW SMALL WOODLAND OWNERS

The degree to which the interviewer knew the respondent may be seen in Table I. More than one-half (50 percent) of those interviewed were known at least "fairly well." The interviewer knew all of the innovators either "very well" or "fairly well" as compared to 35 percent for the noninnovators.

II. OWNER ATTITUDE TOWARD SURVEY

The information in this survey depended largely on the attitude and response of woodland owners.

Eighty-nine percent of all owners were "friendly" or "somewhat friendly" toward the survey according to the data in Table II. All of the innovators were in the category compared to 85 percent of the noninnovators.

III. WOODLAND ACREAGE

Reference to Table III shows that the total average acreage owned by all respondents was 147 acres; the innovators averaging larger holdings (208 acres) than the noninnovators (120 acres). Also, 81 percent of all landowners interviewed owned more than 20 acres of woodland. Forty percent of all the farmers owned 50 acres or more of woodland. Fifty-six percent of the innovators owned more than 50 acres compared to only 35 percent of the noninnovators owning 50 acres or more.

TABLE I

DEGREE TO WHICH THE INTERVIEWER KNEW ALL OWNERS, INNOVATORS AND NONINNOVATORS BY PERCENTS*

Degree to Which Interviewer Knew Respondent	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Very well	16	48	5
Fairly well	35	52	30
Not very well	31	0	41
Not at all	18	0	24
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE II

ATTITUDE TOWARD THE SURVEY AS DETERMINED BY THE INTERVIEWER ACCORDING TO PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Attitude Toward Survey	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Friendly	53	76	45
Somewhat friendly	36	24	40
Indifferent	11	0	15
Antagonistic	0	0	0
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE III

AMOUNTS OF TOTAL WOODLAND IN SELECTED ACREAGE CATEGORIES ACCORDING TO PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Acreage Interval	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
5-9	5	8	4
10-19	14	8	16
20-29	25	16	28
30-49	16	12	17
50-99	22		
100-249	15	16	15
250-499	2	0	3
500-2500	1	4	0
Total	100	100	100
Total Average Owned	147 acres	208 acres	120 acres

*Percents are rounded to the nearest whole number.

IV. PORTION OF TOTAL LAND IN WOODLAND

Nearly two-thirds (61 percent) of all owners had less than one-half of their total land in woodland according to data in Table IV. A larger percent of innovators (72 percent) than noninnovators (57 percent) had less than one-half of their land in woodland.

V. DISTANCE OF WOODLAND FROM HOME OF OWNER

The data in Table V show that 86 percent of all the farmers interviewed lived on the land tract that included their woodland acreage. Ninety-two percent of the innovators indicated that their woodland was on the farm they lived on, and the remaining 8 percent said their woodland was less than ten miles from their home. The data also indicated that 8 percent of the noninnovators owned woodland more than 10 miles from their residence.

VI. MAJOR OCCUPATIONS

Forty-eight percent of all owners surveyed were full-time farmers. With reference to Table VI it can be seen that 76 percent of the innovators surveyed were full-time farmers compared to only 39 percent of the noninnovators. Twenty percent of the noninnovators were wage earners, while only 4 percent of the innovators were wage earners. Eight percent of the innovators were in a professional occupation and only 5 percent of the noninnovators were so classified. It is interesting to note that 11 percent of the noninnovators were housewives or widows compared to none of the innovators. A greater percent (8 percent) of the noninnovators were retired than the innovators (4 percent).

TABLE IV

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS HAVING DIFFERENT PORTIONS OF THEIR TOTAL LAND IN WOODLAND*

Portion of Total Land in Woodland	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Less than one-fourth	28	40	24
One-fourth to one-half	33	32	33
One-half to three-fourths	24	24	24
Three-fourths to all	14	4	17
All	1	0	2
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE V

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS LIVING DESIGNATED DISTANCES FROM THEIR WOODLAND*

Distance from Woodland	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Live on place	86	92	84
Less than 10 miles	8	8	8
10-29 miles	4	0	5
100 miles or more	2	0	3
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE VI

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS IN THE VARIOUS MAJOR OCCUPATIONS*

Major Occupation	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Full-time farmer	48	76	39
Part-time farmer	5	0	6
Business	7	4	8
Professional	6	8	5
Wage earner	16	4	20
Housewife or widow	8	0	11
Retired	7	4	8
Other	3	4	3
Total	100	100	100

*Percents are rounded to the nearest whole number.

VII. FARM ENTERPRISES

The two major farm enterprises most frequently mentioned by all owners were tobacco, 58 percent, and dairy, 19 percent. This is shown in Table VII. In comparing innovators with noninnovators, it is seen that more than one-half of the former (52 percent) and only 8 percent of the latter mention dairy as the major enterprise. Also, only 24 percent of the innovators reported tobacco as a major enterprise compared with 70 percent of the noninnovators. Similiar percents of innovators (12 percent) and noninnovators (11 percent) reported beef as a major farm enterprise. Only 4 percent of those interviewed in all categories mentioned forestry as the major enterprise.

VIII. EDUCATIONAL LEVEL

The average educational grade level of all owners was 817. The data in Table VIII also indicate that the innovators had an average educational level of above the tenth grade (10.6) compared to 8.0 grade for the noninnovators. Only 16 percent of the innovators reported an educational level of less than the eighth grade compared to 35 percent of the noninnovators. Twenty-eight percent of the former and 9 percent of the latter reported at least some college work.

IX. GROSS FAMILY INCOME

The question on family income was optional, and 16 percent of all owners failed to answer. Study of the information recorded in Table IX shows that the average gross family income of all owners in 1962 was $5,810. The gross family income of the innovators was an

TABLE VII

MAJOR FARM ENTERPRISES ACCORDING TO PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Major Farm Enterprise	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Tobacco	58	24	70
Dairy	19	52	8
Beef	11	12	11
General farm	5	4	5
Forestry	4	4	4
Other livestock	2	4	1
Grain producer	1	0	1
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE VIII

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS IN VARIOUS EDUCATIONAL GROUPS AND THEIR AVERAGE EDUCATIONAL LEVELS*

Educational Category	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
No answer	4	4	4
1 - 4	11	0	15
5 - 7	19	16	20
8	30	24	32
9 - 11	13	16	12
12	9	12	8
College			
1 - 3	6	12	4
BS	6	4	1
Graduate work or advanced degree	2	4	1
Total	100	100	100
Av. Educ. level of Those Reporting	8.7 grade	10.6 grade	8.0 grade

*Percents are rounded to the nearest whole number.

TABLE IX

TOTAL 1962 GROSS FAMILY INCOMES AND AVERAGE INCOMES BY PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Total Gross Family Income Category	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
No answer	16	20	16
$0 - 1,999	32	0	43
2,000 - 3,999	24	16	27
4,000 - 5,999	6	8	5
6,000 - 7,999	4	4	4
8,000 - 9,999	2	4	1
10,000 - 11,999	3	12	0
12,000 - 13,999	1	0	1
14,000 - 15,999	4	12	1
16,000 - 17,999	4	12	1
18,000 - 19,999	2	4	1
20,000 - 99,999	2	8	0
Total	100	100	100
Average	$5,810	$14,100	$3,219

*Percents are rounded to the nearest whole number.

average of $14,100 annually compared to the noninnovators average income of $3,219. Seventy percent of the noninnovators reported a gross family income of less than $4,000, while only 16 percent of the innovators so reported. None of the innovators reported an annual gross family income below $2,000, yet the table shows that 43 percent of the noninnovators reported an annual income below that level.

X. MARKETING TIMBER BY GROSS SALE

Almost one-half (47 percent) of the farmers surveyed indicated no timber sales in the six year period 1957-1962 as shown in Table X. The data also indicate that another 26 percent of the landowners sold less than $250 of woodland products in this same period of time.

No major differences can be seen between the innovators and noninnovators, excepting in the sales catagory of $1,000 and over, where 16 percent of the innovators and only 6 percent of the noninnovators reported.

XI. AGE OF OWNER

The small woodland owners included in the study had an average age of 51.3 years according to data in Table XI. It is interesting to note that 59 percent of the noninnovators were over 50 years of age compared to only 44 percent of the innovators being that old. The innovators average was 47.5 years compared to the noninnovators age of 52.9 years.

TABLE X

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS SELLING TIMBER DURING THE PAST FIVE YEARS ACCORDING TO GROSS SALES*

Gross Sales Category	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
No sales	47	48	47
Less than $250	26	24	27
250 - 499	9	8	9
500 - 999	9	4	11
1000 and over	9	16	6
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE XI

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS IN VARIOUS AGE GROUPS AND THEIR AVERAGE AGES*

Age Category	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Under 30	3	4	3
30 - 39	16	20	14
40 - 49	26	32	24
50 - 59	21	28	19
60 or more	34	16	40
Total	100	100	100
Average age	51.3 years	47.5 years	52.9 years

*Percents are rounded to the nearest whole number.

XII. INTEREST IN WOODLAND IMPROVEMENT

According to the opinion of the interviewer, 53 percent of all owners were "somewhat interested" to "very interested" in woodland improvement. There is a marked difference in the attitude of innovators toward woodland improvement compared to that of the noninnovators as evidenced by studying the data in Table XII. The data indicate that 20 percent of the innovators were "very interested" in woodland improvement compared to only 8 percent of the noninnovators. Seventy-six percent of the innovators were "somewhat interested" to "very interested" in woodland improvement compared to only 46 percent of the noninnovators with like interest. The data also indicate that only 24 percent of the innovators were "indifferent" to "not interested" in the improvement of their woodland compared to 54 percent of the noninnovators fitting into these categories.

XIII. MANAGEMENT SERVICE SYSTEM PREFERRED

Table XIII lists three management systems that small woodland owners might use to get help in their woodland improvement program. Almost one-half of all owners (47 percent) said they were "not interested" in any of the systems. However, it is interesting to note that only 24 percent of the innovators said they were "not interested" compared to 54 percent of the noninnovators.

Twenty percent of the innovators were "interested" in employing a forester by private arrangement or joining an association to employ one compared to only 7 percent of the noninnovators.

TABLE XII

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS ACCORDING TO INTERVIEWERS OPINION OF RESPONDENTS' INTEREST IN WOODLAND IMPROVEMENT*

Interest in Improvement Category	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Very interested	11	20	8
Somewhat interested	42	56	38
Indifferent	34	12	41
Not interested	13	12	13
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE XIII

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS BY MANAGEMENT SERVICE SYSTEM PREFERRED*

Management System Preferred	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Private arrangement with Forester	6	12	4
Association with private Forester	4	8	3
Forester secured other way	43	56	39
None of them	47	24	54
Total	100	100	100

*Percents are rounded to the nearest whole number.

XIV. WOODLAND OWNERS' RATINGS OF THEIR WOODLAND

The data in Table XIV show that only 18 percent of all owners rated the condition of their woodland as "good" or better and 70 percent rated their woodland "fair." Twenty eight percent of the innovators rate the condition of their woodland as "good" or better compared to only 15 percent of the noninnovators giving the same rating to their woodland. Twenty percent of the innovators said that the condition of their woodland was "poor" compared to only 9 percent of the noninnovators.

XV. INTERVIEWER'S RATING OF THE CONDITION OF THE OWNER'S WOODLAND

The interviewer was not familiar with the condition of the owner's woodland on 75 percent of all farms surveyed as indicated by data in Table XV. However, he was more familiar with the condition of the innovators' woodland (52 percent) compared to only 13 percent of the noninnovators' woodland. The interviewer rated the condition of 22 percent of all owners' woodland as "fair" or better. He rated the woodland of 48 percent of the innovators as "fair" or better and gave only 13 percent of the woodland of the noninnovators that rating.

XVI. SEX OF OWNER

Only 10 percent of all the owners surveyed were female as seen in Table XVI. Only 4 percent of the innovators were female compared to 12 percent of the noninnovators.

TABLE XIV

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS RATING THE PRESENT CONDITION AND VALUE OF THEIR WOODLAND IN SELECTED CATEGORIES*

Woodland Rating Category	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Excellent	3	4	3
Good	15	24	12
Fair	70	52	76
Poor	12	20	9
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE XV

INTERVIEWERS' RATINGS OF THE PRESENT CONDITION AND VALUE OF WOODLAND OF ALL OWNERS, INNOVATORS AND NONINNOVATORS BY PERCENTS*

Woodland Rating Category	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N - 75)
Interviewer was not familiar with condition of woodland	75	48	84
Excellent	0	0	0
Good	6	12	4
Fair	16	36	9
Poor	3	4	3
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE XVI

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS BY SEX*

Sex of Woodland Owner	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Male	90	96	88
Female	10	4	12
Total	100	100	100

*Percents are rounded to the nearest whole number.

CHAPTER III

SUMMARY

A total of 100 small woodland owners (25 innovators and 75 noninnovators) were interviewed in Monroe County in 1962-63. The generally stated questions of study were:

1. What are the characteristics of small woodland owners in Monroe County?
2. What are the characteristics of innovators?
3. What are the characteristics of noninnovators?

I. REVIEW OF FINDINGS

Listed below is a brief summary of the major findings of the study as related to the characteristics of small woodland owners in Monroe County.

1. The interviewer knew all of the innovators either "very well" or "fairly well" as compared to only 35 percent of the noninnovators.
2. Eighty-nine percent of all owners were "friendly" or "somewhat friendly" toward the survey.
3. More than one-half (60 percent) of all owners owned less than 50 acres of woodland. Only 44 percent of the innovators owned less than 50 acres of woodland while 65 percent of the noninnovators were so classified.
4. Nearly two-thirds (61 percent) of all owners had less than one-half of their total land in woodland. The noninnovators had a larger portion of their land in woodland than the innovators.

5. A high percentage (86 percent) of all owners lived on the land tract that included their woodland acreage. Innovator and noninnovator did not differ appreciably.

6. Nearly one-half (48 percent) of all owners were full-time farmers. Three-fourths (76 percent) of the innovators were full-time farmers, while only 39 percent of the noninnovators were so classified.

7. Over one-half (58 percent) of all owners listed "tobacco" as their major farm enterprise and another 19 percent reported "dairy" to be their major source of farm income. Seventy percent of the noninnovators reported "tobacco" as their major farm enterprise compared to only 24 percent of the innovators. Only one innovator and three noninnovators listed "forestry" as their major farm enterprise.

8. The average educational grade level of all owners was 8.7. Innovators average grade level (10.6) was considerably higher than noninnovators (8.0).

9. The average gross family income for all owners was $5,810. Of those reporting, the innovators averaged $14,100 annually while the noninnovators annual average income was $3,219.

10. Forty-seven percent of the owners surveyed reported that they had not marketed any timber products in the 1957-1962 period and another 26 percent had sold less than $250 of timber products within the same period. Only 9 percent of the owners sold timber products during the period with value totaling $1,000 or more.

11. The average age of all owners was 51.3 years. The innovators, on the average were younger (47.5 years) than the noninnovators (52.9 years).

12. Fifty-three percent of all owners were interested in improving their woodlands. More of the innovators (76 percent) fit into this category than was true for the noninnovators (46 percent).

13. Only 10 percent of all owners were interested in making private arrangements to pay for the services of a forester to assist them in management decisions. However, 43 percent were interested in getting the services of a forester on a free basis. Fifty-four percent of the noninnovators did not see the need for any help, while only 24 percent of the innovators showed this lack of interest.

14. Eighty-eight percent of all owners reported their woodland to be "fair" or better. A higher percentage of the innovators (20 percent) rated their woodland as poor as compared to the noninnovators (9 percent).

15. Only 10 percent of the owners were women. Nine of the 10 women were classified as noninnovators.

II. IMPLICATIONS

Assuming that the small woodland owners interviewed in Monroe County were typical, the following implications may be drawn from the findings:

1. That land owners of Monroe County would be friendly to educational programs developed in the forestry area by the Extension Service.

2. The relatively small size of the average woodland acreage owned in the county makes it difficult to depend on forest income as the major source of farm family income.

3. Although other major farm enterprises are in better competitive positions than forestry regarding owner time and interest, forestry income could supplement the family income.

4. Where larger woodland acreages (50 acres or more) were owned by families, interest was higher in woodland management. An audience of larger woodland owners, therefore, should be more receptive to programs on forestry management.

5. Most owners live on or near the land that includes their woodland acreage; therefore, at least part of their time could be devoted to use of recommended forest management practices.

6. Forestry programs should be planned to show how forestry management practices could be carried out during the slack time of the year when there would be little labor demand by the major farm enterprises of tobacco, dairy and beef.

7. In planning for educational programs, consideration should be given to the large variation in educational level of the audiences. Although the average grade level of all woodland owners was 8.7, the range was from first grade through graduate work in college.

8. The large difference in average age of the land owners would need to be considered in developing educational programs (i.e., owners range in age from below 30 years of age to over 60 years of age).

9. Eighty-eight percent of all land owners rated their woodland as "fair" or better even though they have received little or no income from it during the 1957-1962 year period. Eight-two percent had sold less than $500 worth of woodland products within this period. Woodland owners would profit by timber sales and by increased value of their woodland if it was in a higher state of production.

10. A large percentage (54 percent) of the noninnovators expressed little or no interest in woodland improvement. Therefore, careful planning should be made in order to involve them in a learning program.

PROBLEM B

MANAGEMENT PRACTICES OF MONROE COUNTY WOODLAND OWNERS

A Special Problem in Lieu of Thesis

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

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by

Ray C. Stamey

June 1971

CHAPTER I

INTRODUCTION

Historically, the forest industry has made a major contribution to the economic development of Monroe County. It has served as an important source of income, both from the sale of timber and through income from the tourism attracted.

In 1965, sixteen sawmills and other forestry firms employed over 170 people, supplied a payroll of $559,000 and purchased an estimated $1,675,000 worth of timber (12:32).* Approximately 112,000 acres of privately-owned woodland in 1967 produced over $353,000 income from pulpwood sales alone. There was an estimated saw timber volume of 785 million boardfeet or an average of slightly more than 3,000 boardfeet per acre standing in Monroe County woodlands according to the forestry committee of the Monroe County Development Committee in 1969. The average annual growth rate of this woodland was estimated at 165 boardfeet per acre (12:33). Demonstrational forests and United States Forest Service studies have demonstrated that the rate of growth can be increased to nearly 300 boardfeet per acre per year using recommended management practices.

Monroe County forests contain, among other valuable woodland species: pine, oak, popular, maple, hickory and beech. Much of the timber in the hardwood tracts is poor quality because the past management

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*Numbers in parentheses refer to numbered references in the Bibliography; those after the colon, when they appear, are page numbers.

practice has been to cut the economically more valuable trees and leave trees of lower value to take over the land. Fires were allowed to burn large acreages of woodland in the 1930's, 1940's and 1950's and this lowered the quality of the remaining trees in such burned over areas. Prior to the study, land owners had not realized as much income from their timber sales as they expected because immature and low volume trees were being harvested. By cutting over large areas in order to supply the needed volume, owners had depleted the supply of good marketable timber in the county. Thousands of acres of poorly stocked woodland, steep hills, rough and eroded areas were in need of reforestation so that each acre could produce a greater economic return. Aesthetically, it was felt, reforestation of such areas also would add much to the beauty of Monroe County's landscape.

Many woodland owners in Monroe County had come to consider woodland as a comparatively poor source of income. They felt that it took too long to grow timber to make it profitable within their lifetimes. In previous studies, woodland owners reportedly contended that more rewarding activities demand their time. This was especially true of those engaged in commercial farming activities. The expense involved in converting woodland areas from poor quality species to more desirable species also was seen to be a problem for low income owners.

In general, however, farmers are known to want some woodland on their farms for lumber, conservation, shade for cattle, firewood, posts, a long-time investment, recreation, and the aesthetic value mentioned earlier.

If the present woodland acreage was properly managed, and the land areas reforested where needed, professional foresters agreed that a conservative estimate of the annual income to the land owners would exceed $2,000,000. Each acre set in trees and properly managed might be expected to yield a future average income of 10 to 15 dollars per acre per year (12:34).

Very little was known about the forest management practices of Monroe County woodland owners until this study was made. Based on their observations and experience, foresters had speculated concerning practice use and why landowners used certain practices. It was felt that a study of the present situation concerning management practices of small woodland owners would provide information to use as a base for educational programs designed to help present and future woodland owners become more efficient managers of their woodland holdings.

I. THE PURPOSE OF THE STUDY

The purpose of this study was to determine which of certain recommended forestry management practices were being used by Monroe County woodland owners. An attempt also was made to determine any differences that might have existed between innovators and noninnovators regarding the adoption of selected recommended woodland management practices.

II. REVIEW OF LITERATURE

Recent studies that had been conducted in Tennessee and other

states recorded information concerning the small woodland owners and the forest management practices that they were using. Some of the studies attempted to show the differences that existed between innovators and noninnovators in relation to their adoption and use of recommended forest management practices. Efforts also were made to determine in which stages of the diffusion process woodland owners were regarding the recommended forest management practices.

In an interview-type study in five counties of Tennessee during 1962-63, Sharp and Dotson (19:iii) found that innovators tended to be farther along in the adoption process than were noninnovators with regard to all 12 practices having special relevance in Tennessee. The total group, on the average, was as far along as the "trial stage" on the practice "shopping around for the best price for selling trees," but nevertheless most indicated that they sold to the "usual buyer" without consulting other buyers.

The total group (19:iv), on the average, was in the "planning to try stage" on the following nine practices: (1) having a plan for growing and selling woodland products;(2) getting professional forestry advice; (3) participating in government forest programs;(4) planting for reforestation;(5) establishing trees on appropriate open land;(6) marking trees for selective cutting;(7) thinning the woods;(8) using a written sales contract; and(9) selling trees to obtain optimum returns.

Average owners were found to be in the "interested stage" on the practice of "killing undesirable trees." They were in the "awareness stage" on the practice of "participating in non-government forest programs."

A recent study of privately-owned small woodlands in the Tennessee Valey reported by Richard Kilbourne (8) showed that 52 percent of the wooded area (representing 64 percent of the land owners) was still classed as "poor" in quality of trees. Some progress had been made. Forty-eight percent of the privately-owned woodlands was receiving some kind of management. Twelve percent rated "good" to "excellent." There were high hopes that the $355,000,000 timber business in the Tennessee Valley could move rapidly toward the potential which was determined to be near a billion dollars or three times as great as when the survey was made.

Barraclough (2:12) stated that research was needed to show exactly what forest management had to offer an owner. To do this, he noted, the findings of silviculture and engineering research must be related to the problems of the individual owners.

In his writing concerning the adoption by rural people of new ideas and practices, in 1960, Lionberger (10:103) noted that since successful farm practice adoption was instrumental in providing the means for supporting a higher level of living, a positive correlation between the two would be expected and was generally found.

Romancier and Brender in a Southeastern Forest Experiment Station paper written in 1962 (14:1) stated that trees can be a crop, just as cotton, corn, and pecans are a crop. Trees, however, differ from annual crops in that all along they reach maturity for one product or another, and usually there will be some trees left to grow and increase in value. They also noted that recommended management practices paid off during a 12 year period on a 38 acre woodlot in the Georgia Piedmont (1948 - 1960).

During the period, $1,920 worth of trees was harvested, and the timber left standing was worth almost $5,000 more than the value of the timber on the woodlot at the beginning of the program. This represented an average annual production of $15.49 per acre.

Don Kittenbeil in a speech given in 1963 concerning forest management practices of small woodlot owner in the Tennessee Valley (9) said that a representative acre of land on the Cumberland Plateau would furnish an income of approximately $112 per acre over a 35 year period above a 5.5 percent interest charge annually for all money invested. This would equal approximately 13.5 percent annual return investment if recommended woodland practices were followed.

Reynolds (13:5) noted that well-spaced, immature trees gave highest returns on investment. He reported that a forestry experiment in Georgia with a pine forest gave the following returns: four-inch diameter pine trees earned interest at 38 percent per year; five-inch trees earned 27 percent; six-inch trees earned 12 percent; and 10-inch trees earned 9 percent.

Black (3:436) listed the following priorities that should be followed in recommended woodland management program: (1) control fire; (2) remove the less desirable trees that interfere with the development of valuable timber; and (3) develop a management plan for operating the woodlot.

Schallau (17:4) reported in a Michigan study during 1962 that the more efficient managers generally had better marketing practices, contacted two or more buyers before selling, had a written contract for the

the timber sale, and sold pulpwood from marked stands.

Frutchey and Williams (6:4) noted that "good" woodland managers were in the "trial" and "adoption" stages of the diffusion process. "Poor" managers were in the "aware of," "interested in" or "exploration stages" of the diffusion process. They also found that the more efficient woodland managers customarily sought and used technical assistance in forestry matters.

III. METHODS

A complete list of all farmers (2329) in Monroe County was obtained from the Monroe County Agricultural Stabilization and Conservation office. From that list, a panel composed of the County Agricultural Agent, Soil Conservation Service Technician, and Farmers Home Administration supervisor selected 304 innovators. Twenty-five of these were randomly selected to be interviewed as innovators. All the rest of the farmers (2025) were listed as noninnovators. Seventy-five of these latter were farmers randomly selected to be interviewed as noninnovators.

Definitions of innovators, noninnovators, and small woodland owners can be found in Problem A, page 12.

Each of the woodland owners was personally interviewed concerning his woodland. In obtaining the information regarding the management practices, the interviewer made only brief explanations in order to get the accurate opinion of the owner. The respondent, therefore, understood each practice and freely answered as he was carrying out the practices in his woodlands.

IV. RATING EXPLANATION

Twenty-one recommended woodland management practices were included in the interview schedule in an effort to determine the level of management at which the small woodland owners in Monroe County were operating.

The following rating system was used to identify management levels of landowners on each of the twenty-one forestry practices: (1) no points were given if the owner was "unaware" of the specific practice; (2) one point was given if the owner was only "aware" of the practice; (3) two points were given if the owner was only "interested" in the practice; (4) three points were given if the owner had not tried the practice, but "planned to try it"; (5) four points were given if the owner had "tried" the practice, but was "not using" it at the time of the interview; and (6) five points were given if the owner had tried the practice and was still "using" it.

For study purposes, average practice diffusion ratings of the groups are compared as they fall in one or another of the following stages: "unaware," 0 - .49; "aware," .5 - 1.49; "interested in it," 1.5 - 2.49; "planning to try," 2.5 - 3.49; "tried and not using," 3.5 - 4.49; and "using," 4.5 - 5.0.

An average practice diffusion rating was determined for each woodland owner by adding up his total score and dividing by 21 (the number of recommended practices in the interview). Group total average diffusion ratings were completed in order to compare groups. Other data reported are percents and averages. The main comparisons are between innovators and noninnovators.

CHAPTER II

FINDINGS

I. INTERVIEW'S RATING OF WOODLAND MANAGEMENT LEVEL

Table XVII gives the average practice diffusion ratings for the 100 Monroe County woodland owners, 25 innovators and 75 noninnovators, as each owner was rated by the interviewer.

The total average practice diffusion rating of all owners was 1.72, just "interested" in the practices. The innovators rated higher (2.22) near the "planning to try" stage, while the noninnovators were scarcely "interested" (1.56). Seventy-one percent of all owners had not even reached the "interested" stage. A smaller percentage of the innovators (56 percent) were so classified than the noninnovators (75 percent).

Seventeen percent of all owners were in the "using" stage (4.50 - 5.00). A greater percent of the innovators (24 percent) was in this stage compared to the noninnovators (15 percent).

Eleven percent of all owners were "unaware" of the practices. Only 4 percent of the innovators were classified in this stage, while 14 percent of the noninnovators were in that category. Study of the other three stages shows only small differences in ratings of innovators and noninnovators.

II. PRACTICES IN GENERAL

The data in Table XVIII indicate that the average woodland practice

TABLE XVII

INTERVIEWER'S AVERAGE PRACTICE DIFFUSION RATINGS AND TOTAL AVERAGE RATINGS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS BY PERCENTS*

Average Practice Diffusion Rating Interval**	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
0.00 - 0.49	11	4	14
0.50 - 1.49	60	52	61
1.50 - 2.49	8	8	8
2.50 - 3.49	3	8	1
3.50 - 4.49	1	4	1
4.50 - 5.00	17	24	15
Total	100	100	100
Total average rating	1.72	2.22	1.56

*Percents are rounded to the nearest whole number.

**In the rating scale used: 0 = unaware; 1 = aware of the 21 recommended practices; 2 = interested in the practices; 3 = planning to try the practices; 4 = tried the practices but not using; and 5 = using the practices.

TABLE XVIII

AVERAGE WOODLAND PRACTICE DIFFUSION RATINGS AND TOTAL AVERAGE RATINGS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Woodland Management Practice	All Owners Average Rating (N = 100)	Innovators Average Rating (N = 25)	Noninnovators Average Rating (N = 75)
1. Control grazing (fencing out livestock)	2.66	3.00	2.53
2. Shopping around for best price for selling trees	2.59	2.64	2.57
3. Establishing woodland on open land suited to trees	2.41	3.08	2.19
4. Selling trees to obtain optimum returns	2.24	2.68	2.09
5. Establishing a diameter limit for trees to be cut	2.24	2.36	2.20
6. Killing undesirable trees	2.12	2.60	1.96
7. Planting trees to reforest woodland	2.02	2.68	1.80
8. Using a written contract in selling trees	1.83	2.00	1.77
9. Getting the advice of professional foresters	1.75	2.72	1.43
10. Marking trees for selective cutting	1.64	2.32	1.41
11. Starting to harvest trees within a year after marking	1.63	2.00	1.51

TABLE XVIII (continued)

Woodland Management Practice	All Owners Average Rating (N = 100)	Innovators Average Rating (N = 25)	Noninnovators Average Rating (N = 75)
12. Having a plan for growing and selling timber and/or other forest products	1.59	2.12	1.41
13. Thinning the woods	1.53	2.88	1.08
14. Pruning stand trees	1.36	1.76	1.09
15. Participating in non-government forestry programs	1.29	2.16	1.00
16. Making an inventory of the salable timber in your woodland and its value	1.21	1.72	1.04
17. Controlling insects	1.00	1.32	0.89
18. Constructing fire lanes	0.97	1.48	0.80
19. Preparing ground for natural seeding or planting	0.89	1.16	0.80
20. Controlling disease outbreaks	0.84	1.16	0.73
21. Participating in ASC or other forestry programs	0.80	2.72	0.16
Total average rating	1.72	2.22	1.56

*In the rating scale used: 0 = unaware; 1 = aware of the practice; 2 = interested in the practice; 3 = planning to try the practice; 4 = tried the practice, but not now using it; and 5 = using the practice.

diffusion ratings for all owners ranged from a high of 2.66 on Practice 1 (Control grazing) to a low of 0.80 on Practice 21 (Participating in ASC or other forestry programs).

The innovators highest average rating was 3.08 on Practice 3 (Establishing woodland on open land suited to trees) and their lowest average rating was 1.16 on the two Practices 19 (Preparing ground for natural seeding or planting) and 20 (Controlling disease outbreaks).

The noninnovators highest average rating was 2.57 on Practice 2 (Shopping around for the best price for selling trees) and their lowest average rating was 0.16 on Practice 21 (Participating in ASC or other forestry programs).

The average practice diffusion score for all owners was below the middle (1.72) of the "interested" stage. The innovators rating (2.22) was higher in this stage than the noninnovators rating (1.56). The innovators average practice diffusion rating was higher on each and every practice than the noninnovators.

Groups of practices were included in the survey schedule related to certain important aspects of woodland production and marketing. They were as follows: practices related to the planning of woodland; practices related to the establishment of the woodland; practices related to the growth and maintenance of the woodland; and practices related to the marketing of timber and woodland products. Each of these will be discussed separately in the following paragraphs.

III. PRACTICES RELATED TO PLANNING OF THE WOODLAND

Four of the woodland management practices studied were related to planning of the woodland. The practices listed in this group included 9, 12, 15, and 21. Each of these practices will be treated separately as they are related in Tables XVIII, XIX, XX, and XXI.

The data indicate that all owners (average rating of 1.75) were in the "interested" stage of Practice 9 (Getting the advice of a professional forester). The innovators average diffusion rating (2.72) "planning to try" stage was almost double the noninnovators (1.43) "interested" stage. Two-thirds (68 percent) of all owners were in the "aware" stage of the practice; another 10 percent were in the "interested" stage, and 13 percent were in the "using" stage. When innovators and noninnovators were compared, it was found that over one-third (36 percent) of the innovators and only 5 percent of the noninnovators were "using" the practice. Almost one-half (48 percent) of the innovators were in the "aware" and none in the "unaware" stage, while three-fourths (75 percent) of the noninnovators were in the "aware" and 4 percent in the "unaware" stage.

Another practice related to planning of the woodland is Practice 12 (Having a plan for growing and selling timber and/or other forest products). The average practice diffusion rating of all owners in this practice (1.59) placed them in the "interested" stage. Innovators were at the top of the "interested" stage (2.12), in comparison, noninnovators were only in the "aware" stage (1.41).

More than two-thirds (71 percent) of all owners were "unaware" or

TABLE XIX

PERCENTS OF ALL OWNERS AT THE VARIOUS STAGES OF THE DIFFUSION PROCESS WITH REGARD TO SELECTED WOODLAND MANAGEMENT PRACTICES

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to try Percent	Tried and Not Using Percent	Using Percent	Total N = 100 Percent
1. Control grazing (fencing out livestock)	5	47	5	1	0	42	100
2. Shopping around for best price for selling trees	3	46	10	3	2	36	100
3. Establishing woodland on open land suited to trees	3	54	8	2	0	33	100
4. Selling trees to obtain optimum returns	3	58	7	2	0	30	100
5. Establishing a diameter limit for trees to be cut	1	60	8	2	0	29	100
6. Killing undesirable trees	3	50	16	11	0	20	100
7. Planting trees to reforest woodland	1	62	12	4	1	20	100
8. Using a written contract for selling trees	1	67	11	7	1	13	100
9. Getting advice of professional forester	3	68	10	3	3	13	100
10. Marking trees for selective cutting	2	69	13	7	1	8	100
11. Starting to harvest trees within one year after marking	2	75	4	2	1	16	100

TABLE XIX (continued)

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to try Percent	Tried and Not Using Percent	Using Percent	Total N = 100 Percent
12. Having a plan for growing and selling timber and/or other forest products	21	50	10	3	0	16	100
13. Thinning the woods	1	49	12	4	2	22	100
14. Pruning stand trees	23	61	5	0	0	11	100
15. Participating in non-government forestry programs	7	81	4	0	0	8	100
16. Making an inventory of the salable timber in your woodland and its value	32	45	10	4	1	8	100
17. Controlling insects	17	75	5	2	0	1	100
18. Constructing firelanes	36	54	2	2	1	5	100
19. Preparing ground for natural seeding or planting	35	56	4	0	0	5	100
20. Controlling disease outbreaks	23	71	3	2	0	1	100
21. Participating in ASC or other forestry programs	0	72	9	4	0	15	100
Total average percent	11	60	8	3	1	17	100

TABLE XX

PERCENTS OF INNOVATORS AT THE VARIOUS STAGES OF THE DIFFUSION PROCESS WITH REGARD TO SELECTED WOODLAND MANAGEMENT PRACTICES

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to Try Percent	Tried and Not Using Percent	Using Percent	Total N = 25 Percent
1. Control grazing (fencing out livestock)	0	48	0	4	0	48	100
2. Shopping around for best price for selling trees	0	52	4	8	0	36	100
3. Establishing woodland on open land suited to trees	4	36	8	4	0	48	100
4. Selling trees to obtain optimum returns	3	48	8	8	0	36	100
5. Establishing a diameter limit for trees to be cut	4	52	8	8	0	28	100
6. Killing undesirable trees	0	28	24	28	0	20	100
7. Planting trees to reforest woodland	0	48	8	4	4	36	100
8. Using a written contract for selling trees	0	60	4	24	0	12	100
9. Getting advice of professional forester	0	48	8	4	4	36	100
10. Marking trees for selective cutting	0	52	4	24	0	20	100
11. Starting to harvest trees within one year after marking	8	60	4	4	0	24	100

TABLE XX (continued)

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to Try Percent	Tried and Not Using Percent	Using Percent	Total N = 25 Percent
12. Having a plan for growing and selling timber and/or other forest products	0	52	24	4	0	20	100
13. Thinning the woods	4	28	16	12	8	32	100
14. Pruning stand trees	12	60	8	0	0	20	100
15. Participating in non-government forestry programs	0	68	4	0	0	28	100
16. Making an inventory of the salable timber in your woodland and its value	4	60	16	8	4	8	100
17. Controlling insects	0	88	0	8	0	4	100
18. Constructing firelanes	16	64	0	8	0	12	100
19. Preparing ground for natural seeding or planting	20	68	4	0	0	8	100
20. Controlling disease outbreaks	4	84	4	8	0	0	100
21. Participating in ASC or other forestry programs	0	48	4	12	0	36	100
Total average percent	4	52	8	8	4	24	100

TABLE XXI

PERCENTS OF NONINNOVATORS AT THE VARIOUS STAGES OF THE DIFFUSION PROCESS WITH REGARD TO SELECTED WOODLAND MANAGEMENT PRACTICES*

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to Try Percent	Tried and Not Using Percent	Using Percent	Total N = 75 Percent
1. Control grazing (fencing out livestock)	7	46	7	0	0	40	100
2. Shopping around for best price for selling trees	4	44	12	1	3	36	100
3. Establishing woodland on open land suited to trees	3	60	8	1	0	28	100
4. Selling trees to obtain optimum returns	4	61	7	0	0	21	100
5. Establishing a diameter limit for trees to be cut	0	64	8	0	0	28	100
6. Killing undesirable trees	4	57	14	5	0	20	100
7. Planting trees to reforest woodland	1	67	13	4	0	15	100
8. Using written contract for selling trees	1	69	14	1	1	14	100
9. Getting advice of professional forester	4	75	10	3	3	5	100
10. Marking trees for selective cutting	3	75	16	1	1	4	100
11. Starting to harvest trees within one year after marking	0	80	4	1	1	14	100

TABLE XXI (continued)

Woodland Management Practice	Unaware Percent	Aware Percent	Interested Percent	Plan to Try Percent	Tried and Not Using Percent	Using Percent	Total N = 75 Percent
12. Having a plan for growing and selling timber and/or other forest products	28	43	5	3	6	15	100
13. Thinning the woods	0	56	11	1	0	32	100
14. Pruning stand trees	27	61	4	0	0	8	100
15. Participating in non-government forestry programs	10	85	4	0	0	1	100
16. Making an inventory of the salable timber in your woodland and its value	41	40	8	3	0	8	100
17. Controlling insects	23	70	7	0	0	0	100
18. Constructing firelanes	43	50	3	0	1	3	100
19. Preparing ground for natural seeding or planting	40	52	4	0	0	4	100
20. Controlling disease outbreaks	29	67	3	0	0	1	100
21. Participating in ASC or other forestry programs	0	80	11	1	0	8	100
Total average percent	14	61	8	1	1	15	100

*Percents are rounded to the nearest whole number.

barely "aware" of this practice and only 16 percent said they were "using" it. Just over one-half (52 percent) of the innovators were only "aware" and none in the "unaware" stage compared to the noninnovators with 43 percent "aware" and 28 percent "unaware" of this practice. Twenty percent of the innovators were "using" the practice and only 15 percent of the noninnovators. Almost one-third (28 percent) of the innovators were either "interested" or "planning to try" the practice compared to only 8 percent of the noninnovators. Six percent of the noninnovators had "tried" and were "not using" the practice.

Practice 15 (Participating in non-government forestry programs) was also related to planning of the woodland. The average rating for all owners (1.29) placed them in the "aware" stage. The innovators (2.16) were "interested" and the noninnovators (1.00) were barely "aware" of the practice.

Almost nine-tenths (88 percent) of all owners were either "aware" or "unaware" of this practice and only 8 percent were "using" it. The data indicate that two-thirds (68 percent) of the innovators were in the "aware" stage, 4 percent "interested," and none were "unaware," compared to the noninnovators with 85 percent "aware," 10 percent "unaware" and 4 percent "interested" in the practice. Twenty-eight percent of the innovators were "using" it compared to only one percent of the noninnovators so classified. No innovators or noninnovators said they were "planning to try" or "had tried" and were "not using" the practice.

The practice with the least appeal to all owners was Practice 21 (Participating in ASC or other forestry programs). All owners (0.80)

were just barely in the "aware" stage. The innovators, on the average, (2.72) were "planning to try" the practice compared to the noninnovators (0.16) who were "unaware" of the practice.

The only Agricultural Stabilization and Conservation program practice available to Monroe County woodland owners at the time of the study was "planting forest tree seedlings." Under this practice, the farmer was reimbursed at the rate of $15.00 per acre.

Almost three-fourths (72 percent) of all owners were "aware" of the practice, 9 percent "interested," 4 percent "planned to try" and only 15 percent were "using" the practice. Nearly one-half (48 percent) of the innovators were "aware" of the practice, 12 percent "planned to try," and 4 percent were "interested" compared to the noninnovators with over three-fourths (80 percent) only "aware," 11 percent "interested" and only 1 percent "planning to try." The number of innovators (36 percent) "using" the practice far surpassed the noninnovators (8 percent).

IV. PRACTICES RELATED TO ESTABLISHMENT OF THE WOODLAND

The Monroe County woodland owners were given a practice diffusion rating on three practices related to establishment of the woodland.

Tables XVIII, XIX, XX, and XXI, pages 53, 57, 59 and 61, respectively, indicate that Practice 3 (Establishing woodland on open land suited to trees) was one of the most popular practices with all owners having a practice diffusion rating of (2.41) "planning to try" stage. The innovators' rating (3.08) indicate, that this was their most popular practice, and the noninnovators' rating (2.19) showed that they were in the

"planning to try" stage. One-third (33 percent) of all owners were "using" the practice. Fifty-four percent of the owners were "aware," 8 percent "interested," 2 percent "planned to try," and only 3 percent were "unaware" of the practice. Almost one-half of the innovators (48 percent) were "using" the practice compared to just over one-fourth (28 percent) of the noninnovators. A little more than one-third (40 percent) of the innovators were in either the "aware" or "unaware" stage; while almost two-thirds (63 percent) of the noninnovators were so classified. The innovators and noninnovators were rated the same (8 percent) in the "interested" stage. Four percent of the innovators were "planning to try" the practice compared to only 1 percent of the noninnovators.

The second most frequently used of the practices relating to establishment of the woodland was Practice 7 (Planting trees to reforest woodland). All owners rated (2.02) in the "planning to try" stage. The innovators rating (2.68) was much higher than the noninnovators (1.80) in the "planning to try" stage.

More than one-third (36 percent) of the innovators were using this practice compared to only 20 percent of the noninnovators. Less than one-half (48 percent) of the innovators were in the "aware" stage and none were "unaware;" while more than two-thirds (67 percent) of the noninnovators were in this category. Fewer innovators (8 percent) were "interested" than noninnovators (13 percent). Like percents (4 percent) of innovators and noninnovators were in the "planning to try" stage. It is interesting to the investigator that no innovators and only 1 percent of the noninnovators were "unaware" of this practice.

Woodland owners were in the "aware" stage (0.89) concerning Practice 19 (Preparing ground for natural seeding or planting). The innovators rating (1.16), in the "aware" stage, was higher than the non-innovators (0.80).

A large percent (91) of all owners were either "unaware" or just "aware" of this practice and only 5 percent were "using" it. Eighty-eight percent of the innovators were either "unaware" or just "aware" of this practice compared to the noninnovators (92 percent). Very few innovators (8 percent) and noninnovators (4 percent) were "using" this practice. Like percents (4 percent) of the innovators and noninnovators were "interested" in the practice. No owners were placed in the "planning to try" or "tried and not using" stages on this practice.

V. PRACTICES RELATED TO GROWTH AND MAINTENANCE OF THE WOODLAND

This study included seven practices which were related to the growth and maintenance of the woodland. The seven practices are discussed below with reference to data in Tables XVIII, XIX, XX, and XXI, pages 53, 57, 59 and 61, respectively.

All Monroe County owners rated Practice 1 (Control grazing) the highest among all twenty-one practices. The average practice diffusion rating for all owners (2.66) was in the "tried" stage. There was little difference between innovators (3.00) and the noninnovators (2.53) since both were in the "tried" stage. Almost one-half (42 percent) of all owners were using the practice. More innovators (48 percent) were using this practice than noninnovators (40 percent).

Practice 6 (Killing undesirable trees) was rated by all owners (2.12) in the middle of the "interested" practice stage. Innovators (2.60) were in the "planning to try" stage while the noninnovators (1.96) were only in the "interested" category. One-fifth (20 percent) of all owners were "using" the practice and another one-fourth (27 percent) were in either the "planning to try" or "interested" stage. Over one-half (52 percent) of the innovators were in either the "planning to try" or "interested" stage, and one-fifth (20 percent) were "using the practice. In comparison, only 19 percent of the noninnovators indicated that they were in either the "interested" or "planning to try" stage, and an equal number (20 percent) said they were "using" the practice. Only 28 percent of the innovators rated as low as the "aware" stage; while a large number (61 percent) of the noninnovators were classified as either "unaware" or only "aware" of this practice.

Practice 13 (Thinning the woods) was at about mid-point (1.53) or the "interested" stage for all owners interviewed. This practice, which is closely related to the growth of quality timber, was used most often by the innovators (average rating of 2.88) who were in the "planning to try" stage and only sparingly by the noninnovators (average of 1.08) who rated in the "aware" stage. One-half (50 percent) of the owners were either "unaware" or only "aware" of this practice, and only 22 percent were "using" it. Almost one-third (32 percent) of the innovators were "using" the practice and another large number (36 percent) were either in the "interested," "planning to try," or "tried" stage compared to 32 percent of the noninnovators being classified as "using" the

practice and 12 percent either "interested" in the practice or "planning to try" it.

A study of management Practice 14 (Pruning stand trees) shows that the rating of all owners (1.36) placed the average owner in only the "aware" stage. Innovators (1.76) were in the "interested" stage while noninnovators (1.09) were barely "aware" of the practice. A large number (84 percent) of all owners were in either the "unaware" or "aware" stage and only 11 percent were "using" the practice. One-fifth (20 percent) of the innovators were "using" this practice compared to only 8 percent of the noninnovators. The number of noninnovators (27 percent) who were "unaware" of the practice was more than double the innovators (12 percent) in this stage.

Practice 17 (Controlling insects) was rated low on the practice diffusion scale (1.00) by all owners. This placed them in the "aware" stage. Innovators (1.32) rated at the top of the "aware" stage compared to the noninnovators (0.89) who were barely in the "aware" stage. A large portion (86 percent) of all owners was classified as either "unaware" or "aware" of the practice and only one was "using" the practice. None of the innovators classified as "unaware" of the practice, compared to almost one-fourth (23 percent) of the noninnovators. Eight percent of the innovators were "planning to try" and another 4 percent were "using" the practice, while none of the noninnovators were placed in either of these stages.

The fire control Practice 18 (Constructing firelanes) found all owners rating (0.97) in the "aware" stage with innovators rating (1.48)

almost in the "interested" stage and the noninnovators (0.80) in the barely "aware" stage. Ninety percent of all owners were in either the "unaware" or "aware" stage and only 5 percent were "using" the practice. Almost one-half (43 percent) of the noninnovators were "unaware" of the practice and another one-half (50 percent) were only "aware." In comparison, only 16 percent of the innovators were "unaware" and 64 percent were "aware" of the practice. Twelve percent of the innovators were "using" the practice and only 3 percent of the noninnovators were given this rating.

Management Practice 20 (Controlling disease outbreaks) rated the lowest of any of the practices related to growth and maintenance of the woodland. The rating of all owners (0.89) placed them near the middle of the "aware" stage. The innovators rating (1.16) placed them in the "aware" stage compared to the noninnovators rating (0.73) which indicated that they were just above the "unaware" stage. A large percent (94) of all owners were in either the "unaware" or barely "aware" stage. Very few innovators (4 percent) were "unaware," compared to 29 percent of the noninnovators who had not even heard of the practice. Only one other practice, Practice 17, (Controlling insects) had as small a percentage (1 percent) of all owners "using" it. None of the innovators and only 1 percent of the noninnovators were "using" the practice.

VI. PRACTICES RELATED TO THE MARKETING OF TIMBER AND WOODLAND PRODUCTS

Seven of the 21 practices studied related to marketing of timber and woodland products. The average practice diffusion ratings and

percents of owners in various stages of the diffusion process in relation to these seven woodland management practices are shown in Tables XVIII, XIX, XX, and XXI, pages 53, 57, 59 and 61, respectively.

The second most popular management practice in the study was Practice 2 (Shopping around for best price for selling trees). The average practice diffusion rating for all owners (2.50) placed them in the "plan to try" stage. Over one-third (36 percent) of all owners were "using" the practice. Almost one-half (49 percent) of all owners were either in the "unaware" or "aware" stage. Four percent of the noninnovators had never heard of the practice and another 44 percent were only "aware" of the practice. In comparison, all of the innovators were classified as being in the "aware" stage or above. More innovators (8 percent) were in the "planning to try" stage than noninnovators (1 percent).

Practice 4 (Selling trees to obtain optimum returns) rated high with all owners because their rating (2.24) placed them in the "interested" stage. The innovators (2.68) were "planning to try" the practice; while the noninnovators (2.09) were only in the "interested" stage. Almost one-third (30 percent) of all owners were "using" the practice and yet there was a large number (61 percent) that fell into either the "unaware" or only "aware" stage. Almost twice as many innovators (36 percent) were "using" the practice as were the noninnovators (21 percent). Just over one-half (51 percent) of the innovators were in either the "unaware" or "aware" stage; while almost two-thirds (65 percent) of the noninnovators were so classified. Like percents (8 percent) of the

innovators were in the "interested" and "plan to try" stages, compared to the noninnovators where only 7 percent were "interested" and none "planned to try" the practice.

Another practice related to marketing of timber was Practice 5 (Establishing a diameter limit for trees to be cut). The average practice diffusion rating of all owners (2.24) was in the "interested" stage. Innovators (2.36) were slightly higher in the "interested" stage than the noninnovators (2.20). Almost two-thirds of all owners (60 percent) were in the "aware" stage and almost one-third (29 percent) were "using" the practice. The innovators and noninnovators rated equally (28 percent) in the number "using" the practice. Four percent of the innovators indicated they were "unaware" of the practice; while none of the noninnovators were placed in that stage. However, there was a lower number (52 percent) of the innovators who were only "aware" of the practice compared to the noninnovators (64 percent) so classified.

In making marketing agreements, such as Practice 8 (Using a written contract for selling trees), the average diffusion rating of all Monroe County owners (1.83) placed them in the "interested" stage. The innovators rating (2.00) was slightly higher than the noninnovators (1.77), in the "interested" stage. Over two-thirds (67 percent) of all owners were only "aware" of this practice and only 13 percent were "using" it. Fewer innovators (60 percent) were in the "aware" stage then noninnovators (64 percent). Innovators (12 percent) and noninnovators (14 percent) were very close in number "using" the practice. Over one-fourth (28 percent) of the innovators were either in the "interested"

or "planned to try" stage in comparison to less than one-sixth (15 percent) of the noninnovators in these stages.

With reference to Practice 10 (Marking trees for selective cutting), all owners (1.64) were in the "interested" stage. Innovators (2.32) were one full stage higher, or at the top of the "interested" stage, than the noninnovators (1.41) who were only "aware" of the practice. Over two-thirds (69 percent) of all owners were in the "aware" stage, but only 8 percent were "using" it. One-fifth (20 percent) of the innovators were "using" the practice and another 24 percent were "planning to try" it, compared to only 4 percent of the noninnovators in the "using" stage and only one percent "planning to try." Three-fourths of the noninnovators were only "aware" of the practice and 3 percent had never heard of it while only 52 percent of the innovators were classified in the "aware" stage and all had heard of it.

A study of Practice 11 (Starting to harvest trees within one year after marking) shows that all owners (1.63) were in the "interested" stage. Innovators (2.00) were in the middle of the "interested" stage; while noninnovators (1.51) were just barely in that stage of interest. Three-fourths (75 percent) of all owners were "aware" of the practice; however, only 16 percent were "using" it. Almost one-fourth (24 percent) of the innovators were "using" the practice compared to only 14 percent of the noninnovators. Only 60 percent of the innovators were placed in the "aware" stage in comparison to a much larger percent (80) of the noninnovators who were so classified.

Another valuable practice related to the marketing of timber is

Practice 16 (Making an inventory of the salable timber in your woodland and its value). However, all owners surveyed (1.21) rated in the "aware" stage concerning this practice. Innovators (1.72) were rated in the "interested" stage; while noninnovators (1.04) were in the lower "aware" stage. Almost one-third of all owners were "unaware" of this practice, 45 percent were only "aware," and only 8 percent were "using" it. The innovators knew more about this practice because only 4 percent were in the "unaware" stage compared to 41 percent of the noninnovators who had not even heard of it. Like percents (8 percent) of innovators and non-innovators were "using" the practice. Nearly one-fourth (24 percent) of the innovators were in either the "interested" or "planning to try" stage concerning this practice; however, only 11 percent of the noninnovators were listed in either of these stages of practice adoption concerning this practice.

VII. SYSTEM USED TO ARRIVE AT PRICE PER TIMBER UNIT

The data in Table XXII indicate that 62 percent of all owners did not sell any timber in the five years previous to the study. Fewer non-innovators (61 percent) than innovators (64 percent) had not sold any timber in the five year period. Twenty-six percent of all owners sold to the usual buyer without consulting other buyers, and only 3 percent sold to the highest bidder after determining all possible prices. A very small percentage of innovators (4 percent) and noninnovators (3 percent) had followed the recommended practice of selling to the highest bidder after determining all possible prices.

TABLE XXII

SYSTEM USED FOR ARRIVING AT THE PRICE PER TIMBER UNIT MARKETED THE PREVIOUS FIVE YEARS BY PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

System Used to Arrive at Price Per Timber Unit Sold	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Did not sell timber	62	64	61
Sold to usual buyer without consulting other buyers	26	8	32
Sold to usual buyer after consulting other buyers	9	24	4
Sold to higher bidder after determining all possible prices	3	4	3
Total	100	100	100

*Percents are rounded to the nearest whole number.

VIII. SOURCES KNOWN FOR TIMBER MARKET INFORMATION

By referring to the data in Table XXIII, one can observe that almost one-half (44 percent) of all owners "did not know" any source of timber market information. Fewer innovators (32 percent) were in this category than noninnovators (48 percent). The greatest number (46 percent) of all owners said their source of timber market information was a "neighbor" or "friend." One-half (50 percent) of the noninnovators received their timber market information from their "neighbor" or "friend," as did 36 percent of the innovators. One-fifth (20 percent) of the innovators used "two or more professionals" as a source of timber market information compared to only 1 percent of the noninnovators. Eight percent of the innovators obtained their timber market information from an "Extension forester" and another 4 percent obtained assistance from the Tennessee Forest "Service forester" compared to none of the noninnovators using either of these sources of information.

IX. INTEREST IN OBTAINING TIMBER MARKET INFORMATION

Almost two-thirds (63 percent) of all owners were either "somewhat interested" or "very interested" in obtaining timber market information as shown in Table XXIV. Sixty-eight percent of the innovators were in one or the other of these two categories compared to 61 percent of the noninnovators. Over one-third (39 percent) of the noninnovators were either "indifferent" or "not interested;" while fewer, only 32 percent, of the innovators were placed in these categories. A greater number (28 percent) of innovators were "very interested" in obtaining timber market

TABLE XXIII

SOURCES KNOWN FOR TIMBER MARKET INFORMATION BY PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Source of Information	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Did not know	44	32	48
Extension forester	2	8	0
Service forester	1	4	0
National forest ranger	1	0	1
Two or more professionals	6	20	1
Neighbor or friend	46	36	50
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE XXIV

INTEREST IN OBTAINING TIMBER MARKET INFORMATION FOR TIMBER AND OTHER FOREST PRODUCTS SHOWN BY PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Degree of Interest in Obtaining Market Information	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Very interested	20	28	17
Somewhat interested	43	40	44
Indifferent	18	16	19
Not interested	19	16	20
Total	100	100	100

*Percents are rounded to the nearest whole number.

information than noninnovators (17 percent).

X. SOURCES KNOWN FOR TIMBER PRODUCTION COST INFORMATION

One-third (34 percent) of all owners interviewed indicated that they considered the "County Agent" their source for timber production cost information. The data in Table XXV also indicate that almost one-fourth (24 percent) of all owners "did not know" a source of such information. Another 22 percent said that they consulted "two or more professionals" for timber production cost information. A great difference was found between innovators and noninnovators on this question. Nearly one-third (32 percent) of the noninnovators said they "did not know" a source of such information, yet none of the innovators gave such an answer. It was interesting to note that almost twice as many noninnovators (39 percent) indicated that the "County Agent" was their source of timber production cost information, than the innovators (20 percent). Three times more innovators (44 percent) used the advice of "two or more professionals" for timber cost information than noninnovators (15 percent). Twelve percent of the innovators depended upon the "Extension Forester" for their timber production cost information compared to only 1 percent of the noninnovators. A like percent (12 percent) of the innovators said they sought the advice of the "Soil Conservationist" for timber production cost information; while only 3 percent of the noninnovators used this source. More noninnovators (8 percent) than innovators (4 percent) sought the advice of a "neighbor or friend" for timber production cost information. Combinations of professionals, such as, Vocational

TABLE XXV

SOURCES KNOWN FOR TIMBER PRODUCTION COST INFORMATION BY PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Source of Information	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Did not know	24	0	32
County agent	34	20	39
Extension forester	4	12	1
Service forester	3	8	1
Soil conservationist	5	12	3
Vocational agricultural teacher	1	0	1
Two or more professionals	22	44	15
Neighbor or friend or other	7	4	8
Total	100	100	100

*Percents are rounded to the nearest whole number.

Agricultural teachers, County Agents, Service Foresters, Soil Conservationists, and others were listed by the owners when their answers were placed in the "two or more professionals" category.

XI. OWNER'S INTEREST IN OBTAINING TIMBER PRODUCTION COST INFORMATION

Almost two-thirds (62 percent) of all owners were either "not interested" or "indifferent" toward obtaining timber production cost information as noted in Table XXVI. Only 5 percent of all owners were "very interested," however, another one-third (33 percent) were "somewhat interested" in obtaining such information. More innovators (12 percent) were "very interested" than noninnovators (3 percent). One-third of the noninnovators (33 percent) and the innovators (32 percent) were "somewhat interested" in obtaining timber production cost information. A larger number of the noninnovators (64 percent) than the innovators (56 percent) were in either the "indifferent or not interested" category.

TABLE XXVI

INTEREST IN OBTAINING INFORMATION CONCERNING TIMBER PRODUCTION COST SHOWN BY PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Degree to which per Acre Timber Production Cost Figures Are Needed	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Very interested	5	12	3
Somewhat interested	33	32	33
Indifferent	33	36	32
Not interested	29	20	32
Total	100	100	100

*Percents are rounded to the nearest whole number.

CHAPTER III

SUMMARY

One hundred small woodland owners in Monroe County were interviewed in the fall of 1962 and the spring of 1963 concerning their use of twenty-one recommended forestry management practices. Owners were questioned concerning their use of the twenty-one practices and were given woodland management practice diffusion ratings ranging from zero for "unaware" to five for "using" the practice. Average practice diffusion ratings were established for all owners, innovators and noninnovators. The average practice diffusion ratings were used in comparing the management levels of all owners, innovators and non-innovators in relation to the twenty-one recommended forestry practices.

Other information was obtained concerning the pricing of timber units, sources known for timber market information, interest of owners in obtaining timber market information for timber and other forest products, sources known for timber production cost information, and owners' interest in obtaining timber production cost information.

I. REVIEW OF FINDINGS

A summary of the important findings as related to woodland management practices used by owners in Monroe County.

1. The average woodland practice diffusion rating for all owners (1.72) placed them in the "interested in practice" stage. The innovators

(2.12) rated higher in this stage than did the noninnovators (1.56).

2. Innovators had a higher average practice diffusion rating on all of the twenty-one recommended practices. A full diffusion stage difference was noted between the innovators and noninnovators for the following practices in the order they were listed in Chapter II: (a) establishing woodland on open land suited to trees; (b) selling trees to obtain optimum returns; (c) killing undesirable trees; (d) planting trees to reforest woodland; (e) getting the advice of professional foresters; (f) marking trees for selective cutting; (g) having a plan for growing and selling timber and/or other forest products; (h) thinning the woods; (i) pruning stand trees; (j) participating in non-government forestry programs; (k) making an inventory of the salable timber in your woodland and its value; and (l) participating in ASC or other forestry programs.

3. Sixty-two percent of all owners did not sell any timber in the five-year period (1958-1962). However, those who did market timber, generally sold to the usual buyer. Only a very small number (3 percent) sold to the highest bidder.

4. Forty-four percent of all owners did not know a source of timber market information. Almost one-half (46 percent) obtained their information from a neighbor or friend.

5. Twenty percent of all owners were "very interested" in obtaining timber market information. Forty-three percent were "somewhat interested." However, nineteen percent were "not interested" in market information.

6. Twenty-four percent of all owners did not know a source for

timber production cost information. A large number (34 percent) of the owners obtained their information from the County Agent. All of the innovators knew a source of timber production cost information; while 32 percent of the noninnovators did not know any source for this information.

7. Only 5 percent of the owners were "very interested" in obtaining timber production cost information. More innovators (12 percent) than noninnovators (3 percent) were "very interested" in obtaining this information. Almost one-third (32 percent) of the noninnovators were "not interested" in obtaining timber production cost information.

II. IMPLICATIONS

1. Monroe County small woodland owners were generally aware of the recommended forestry management practices, but additional educational effort, management assistance and other incentives will be needed in order to assist landowners to adopt more recommended practices.

2. Innovators were further along in the adoption of recommended forestry practices than the noninnovators. This was noted in that innovators rated higher in the diffusion process on every recommended woodland management practice. It will be necessary to plan to give more individual attention to the innovators in order to cause them to advance into the "using" stage for the adoption process. Mass media information, such as, newspaper, radio and television can be used to inform and influence those in the "unaware" or "aware" stage to move toward the "using" stage.

3. Since very few woodland owners of Monroe County sold woodland

in the five-year period studied, and a large portion of the owners did not value their woodlands very highly, these reasons may explain why so many woodland owners have so little interest in the use of recommended woodland practices.

4. More educational effort needs to be made by the Agricultural Extension Service, Vocational Agriculture Teachers, Soil Conservation Service, State Service foresters and others to help woodland owners see the value of using recommended forestry management practices.

PROBLEM C

FACTORS INFLUENCING WOODLAND MANAGEMENT ADOPTION BY MONROE COUNTY WOODLAND OWNERS

A Special Problem in Lieu of Thesis

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

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by

Ray C. Stamey

June 1971

CHAPTER I

INTRODUCTION

This report is based on additional analysis of data from a survey of one hundred small woodland owners conducted during 1962-63 in Monroe County. The data were collected in an effort to determine what motivated small woodland owners concerning their woodland management decisions.

The professional agricultural workers, such as the County Agricultural Agent, Vocational Agricultural Teachers, Soil Conservation personnel, Tennessee State Foresters and industrial foresters have advised and assisted small woodland owners in Monroe County for many years. This assistance has been given mostly on request by the individual. Limited effort had been made in previous years to provide information about woodland management practices to the owners through demonstrations, radio programs, circular letters, tours, farm visits, and community club meetings.

The potential for economic growth through better management of the large woodland acreage in Monroe County makes it imperative that small woodland owners be influenced to avail themselves of their educational opportunities. Information was needed concerning those factors motivating owners to manage their woodlands poorly or well. It was felt that if educational programs were based upon such information, the efforts might be made more successful.

I. PURPOSE OF THE STUDY

The purpose of this study was to try to determine what factors, other than those identified earlier, may have influenced Monroe County woodland owners to adopt or not adopt recommended forestry practices.

II. REVIEW OF LITERATURE

In a 1963 study conducted with a total of 425 small woodland owners in Tennessee, Sharp and Dotson reported the following: (1) nearly two-thirds of the owners felt that small woodland owners did not follow recommended practices because more rewarding activities claimed their time and money; (2) more than one-half of the owners stated that small woodland owners did not follow recommended practices because it took such a long time to grow forestry crops and get income; (3) about one-third disliked their woodlands because their trees were of the wrong species; and (4) more than one-third felt they did not use recommended forestry management practices for the following reasons: (a) cost of practices outweighs possible benefits, (b) do not have technical knowledge needed, and (c) net benefit would result but it would be too small (18:70).*

In a 1945 paper given at the proceedings of the American Philosophical Society where John D. Black was discussing the role of federal, state and local governments in promoting forestry, he reported that it was obvious that one of the major obstacles to better forestry in this country was lack of public concern and the indifference of

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*Numbers in parentheses refer to numbered references in the bibliography; those after the colon, when they appear, are page numbers.

woodland owners. This continues to pose a difficult problem for the foresters. They must find something in the attitudes and reactions of people at large, and of timberland owners, that they can seize upon to draw these groups into their programs. They must find the good "stimulators" (3).

In a survey made in eastern Kentucky by Worley, he revealed that the most important obstacles to good forestry practices were found to be low incomes and poor education. He suggested that the first step was to make the owners aware of the income potential of their woodlands so that they would want to practice forestry management. Then forest management and forest land use alternatives could be presented to them so they could make individual decisions as to the pattern of woodland development best suited to their needs (22:5).

Many new technological advances require large scale operations and substantial economic resources for their use according to Barraclough, who reported an economic analysis of farm forest operating units in 1955 (2:101).

Kilbourne of the Division of Forestry relations, Tennessee Valley Authority, reported at a 1953 Farm Woodlot Conference in Chicago that good forestry practice would be adopted to the extent that it was economic and made sense from the standpoint of sound business management. The extent that this could be done by the small woodland owners was still undetermined (1:25). Black revealed that the woodland on small holdings could add importantly to the meager incomes of the farm operators if it were well managed; but noted that, usually, the need for current income was too pressing to permit investments for the relatively distant future (3:442).

Murray A. Straus, in an article written for Rural Sociology magazine (June 1959), reported that the extent of social participation is known to be associated with adoption of improved farming technology, with income and with other factors related to managerial skill (20:150).

In his research summary on "the characteristics of good and poor managers of small woodlands" Frutchey reported that owners who had better timber stands apparently had greater incentive to practice forestry than those who had poorer stands (6).

In the 1953 National Woodlot Conference it was stated that the job of improving the forest practices used on the small woodlands could best be accomplished by education and practical demonstration (1:79). In 1955, Barraclough said that all too often owners made their forest and other management decisions knowing very little about what would likely result or about what courses of action were open to them (2:13).

In 1960, Worley (22:5) found that the attitudes of the woodland owners in eastern Kentucky were related to their personal circumstances and environment, and because of this, their objectives for forest land often differed from optimum forestry objectives. A need was seen to reorient Kentucky forest research and forestry services from forest objectives to owner objectives.

In his report on the "Adoption of New Ideas and Practices," Lionberger noted that the decision to adopt usually took time. People apparently go through a series of distinguishable stages, such as AWARENESS (first knowledge), INTEREST (active seeking of information), EVALUATION (weighing the evidence), TRIAL (trying out the practice), and ADOPTION (full scale integration of the practice) (10:3).

Cleland in an article published in Rural Sociology, June 1960, said that information about farm or home practices tended to be passed on in non-church-related, informal groups of friends who get together frequently. An agent interested in the dissemination of a given type of information would have greater success if he were careful to channel such information to key people who customarily transmit that type of information (4:215). Straus came to a similar conclusion in an article which appeared in Rural Sociology in June 1959, as he concluded that the decisions made by the farmer in his daily operation are influenced in varying degrees by his social relations and by the system of ideas, values and sentiments to which he subscribes (20:150).

In a 1961 research summary, Frutchey found that the better managers usually sought and used technical assistance in forestry matters. Most owners became interested in forestry through personal contact with public agency representatives rather than through neighbors, books, pamphlets, magazines, or other sources. They responded to encouragement and periodic help from foresters, extension workers, and other public agencies with trained foresters. Those owners contacted most often through the years tended to do the best forestry work (6:21).

Kilbourne of T. V. A. felt the best opportunity for major progress with small woodland owners in the Tennessee Valley was through the personnel of the forest products industry, such as timber and pulpwood buyers, loggers, concentration yard managers, and small sawmill operators. He felt they were in position to build on the ground work laid by Extension Foresters, State Forestry Department, and others (8).

The report given at the 1953 National Woodlot Conference in Chicago included a statement that greater responsibilities were being placed on the Extension forester of today. It was felt that he not only needed to know his subject matter and methodology, but also should be qualified to integrate forestry with soil, water, and wildlife development. It was felt that the forester also should have the ability to organize, plan, and execute a broad-gauge program in cooperation with state agencies, county or community agricultural planning committees, and private groups (1:17).

Baraclough concluded that, in the full analysis, the successful application of any of the proposed forestry practices would depend on the farm operators' ability and ambition. He also said that owners frequently needed help to plan their farm business, and many of them also needed technical assistance to carry out any woodland management plan (2:81).

III. METHODS

Each of the selected one hundred woodland owners of Monroe County were interviewed in 1962-63 using a schedule (see Appendix) consisting of questions designed to reveal characteristics, production practices and factors influencing practice adoption. This study deals with those questions related to the factors influencing practice adoption not already dealt with in the two previous problems.

Main comparisons in the present study will be between the 25 innovators and 75 noninnovators interviewed. Analysis will be made based on simple numbers and percents. Data will be in tabular form.

CHAPTER II

FINDINGS

I. ACREAGE IN DIFFERENT LAND CATEGORIES

The data in Table XXVII show that the average sized farm in Monroe County was 146.5 acres. The innovators owned 208.4 acres compared to the noninnovators 125.8 acres. All owners owned an average of 63.3 acres of woodland or 43 percent of their total land. The innovators had 79.3 acres or 38 percent of their total land in woodland and the noninnovators had 57.9 acres or 46 percent of their total land in woodland. Approximately 41 percent of the total land of all owners, both innovators and noninnovators, was in cropland. It is interesting to note that the innovators had almost twice as much of their land in pasture (21 percent) as the noninnovators (12 percent).

II. THINGS LIKED ABOUT WOODLAND

The information in Table XXVIII indicates that 56 percent of all owners said that their woodlands were of benefit to them because they "provided marketable timber." A lower percent of the innovators (48 percent) gave this benefit than was true for the noninnovators (60 percent). Eighteen percent of all owners said their woodlands furnished "building material" as a benefit. Thirty-six percent of the innovators listed this benefit, while only 12 percent of the noninnovators gave this answer. "General farm use" was listed by 13 percent of all owners as a benefit (all of them noninnovators). This table also shows that

TABLE XXVII

AVERAGE ACREAGES AND AVERAGE PERCENTS OF LAND IN THE VARIOUS CATEGORIES OWNED BY ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Land Category	All Owners		Innovators		Noninnovators	
	Average Acres	Average Percent	Average Acres	Average Percent	Average Acres	Average Percent
Cropland	59.5	41	84.0	40	51.3	41
Pasture (not woodland)	22.2	15	42.6	21	15.4	12
Total woodland	63.3	43	79.3	38	57.9	46
Woodland grazed**	26.1	41	30.0	38	24.8	42
Woodland ungrazed**	37.2	59	49.3	62	33.1	57
Other land	1.5	1	2.5	1	1.2	1
Total land	146.5	100	208.4	100	125.8	100

*Percents are rounded to the nearest whole number.

**These are sub-totals of total woodland and should not be added to total land.

TABLE XXVIII

BENEFITS WOODLAND PROVIDED OWNERS IN ORDER OF FREQUENCY MENTIONED BY PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Benefit Provided	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Marketable timber	56	48	60
Building material	18	36	12
General farm use	13	0	17
Soil conservation	7	12	5
Shelter for livestock	2	4	1
Other benefits	1	0	1
None mentioned	3	0	4
Total	100	100	100

*Percents are rounded to the nearest whole number.

"soil conservation" was listed by 7 percent of all owners as a benefit derived from their woodland. Twelve percent of the innovators gave this benefit, while only 5 percent of the noninnovators said this was a benefit to them. It is interesting to note that 4 percent of the noninnovators could not think of a way their woods benefited them, while every innovator mentioned at least one benefit from their woods.

III. THINGS DISLIKED ABOUT WOODLANDS

When owners were asked why woodlands were not as beneficial as they would like for them to be, 6 percent of all owners said "poor production" was the reason, as shown in Table XXIX. There was no consequential difference in the percentages of innovators and non-innovators giving this reason. Another reason listed by 5 percent of all owners was growth of trees is "too slow." A greater percent of innovators (12 percent) gave this reason than was true for noninnovators (3 percent). It is interesting to note that 4 percent of the noninnovators gave the reason of "needing pasture land" while none of the innovators listed it. Eight percent of the innovators said their woods were of the "wrong species" compared to none of the noninnovators giving this reason. Sixty percent of the innovators and 80 percent of the noninnovators did not dislike anything about their woodlands.

IV. REASONS WHY WOODLAND OWNERS DO NOT ADOPT RECOMMENDED PRACTICES

With reference to Table XXX, the interviewer asked each of the small woodland owners to select three principal reasons why woodland owners generally do not adopt recommended forest management practices.

TABLE XXIX

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS IN ORDER OR FREQUENCY MENTIONED BY REASON FOR LIMITED BENEFIT FROM WOODLAND*

Way in Which Benefit Was Not Provided	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Poor production	6	4	6
Growth is too slow	5	12	3
Other crops yield more	5	12	3
Need pasture land	3	0	4
Not enough for building	3	4	3
Wrong species	2	8	0
Need land for crops	1	0	1
None mentioned	75	60	80
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE XXX

AVERAGE PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS STATING VARIOUS REASONS WHY WOODLAND OWNERS DO NOT ADOPT RECOMMENDED WOODLAND MANAGEMENT PRACTICES (IN THE TOP THREE)*

Reasons Why Woodland Owners Do Not Adopt Recommended Practices	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
More rewarding activities claim time and money	76	84	73
Such a long time to grow crops and get income	68	88	61
Cost of practices outweighs possible benefits	34	20	39
Physically unable to do supervision and management needed	32	12	39
Don't have technical knowledge needed	27	36	24
Hope to clear woodland for pasture	24	24	24
Net benefit would result but too small	19	28	16
Expect to sell my woodland	13	4	16
Uncertainity of ownership in undivided estate	4	0	6
Want to keep woodland "wild" as in nature	2	4	1
Expect to move away from farm	1	0	1

*Each owner gave three reasons why woodland owners did not adopt recommended practices; therefore, percents in the table total 300 percent instead of 100 percent.

They selected three reasons as the most important from twelve reasons established in previous studies and agreed upon by a panel of authorities in the field of forestry. The major reasons selected for not adopting recommended woodland practices were as follows: "more rewarding activities claim time and money" with more innovators (84 percent) than noninnovators (73 percent) selecting this reason first; "such a long time to grow crops and get income" given by 68 percent of all owners, 88 percent of innovators and 61 percent of the noninnovators; "cost of practices outweighs possible benefits" was listed by 34 percent of all owners with only one-half as many innovators (20 percent) giving this reason as noninnovators (39 percent); "physically unable to do supervision and management needed" was selected by 32 percent of the owners with less than one-third as many of the innovators (12 percent) giving this reason compared to noninnovators (39 percent): "don't have technical knowledge needed" was given by 27 percent of all owners, 36 percent of the innovators and 24 percent of the noninnovators; "hope to clear woodland for pasture" was given by equal percents (24 percent) of innovators and noninnovators; "net benefit would result but too small" was listed by 19 percent of all owners with more innovators (28 percent) than noninnovators (16 percent); and "expect to sell my woodland" was given by 13 percent of all owners with one-fourth as many innovators (4 percent) as noninnovators (16 percent) giving this reason. Other reasons selected by the woodland owners can be seen by referring to Table XXX.

V. SEEKING PROFESSIONAL ADVICE

When owners were asked to whom, if anyone, they went for advice on woodland management practices, 85 percent of all owners said that they had not sought any advice as shown in Table XXXI. Fewer innovators (72 percent) than noninnovators (89 percent) gave this answer. More innovators (28 percent) were interested in obtaining professional advice than noninnovators (9 percent). Twelve percent of the innovators had sought the advice of two or more professionals, while none of the noninnovators had checked with that many. Eight percent of the innovators had asked the county agent for advice yet none of the noninnovators had sought his help. The soil conservationist was listed by 5 percent of all owners as their source of woodland information with almost equal number of innovators (4 percent) and noninnovators (6 percent). Equal percents (4 percent) of innovators and noninnovators had sought the advice of neighbors, friends, and other nonprofessionals.

VI. INTERVIEWER'S OPINION AS TO WHETHER OWNER SHOULD HAVE PAID MORE ATTENTION TO WOODLAND MANAGEMENT

Table XXXII shows, in the interviewer's opinion, that over nine-tenths (92 percent) of all owners should have paid "more attention" to the management of their woodlands. There was very little difference noted between the innovators (88 percent) and noninnovators (94 percent). The interviewer was "uncertain" of about 6 percent of the woodland owners because he did not know them. It was felt that 2 percent of the

TABLE XXXI

PROFESSIONAL WORKERS AND OTHERS WHOSE ADVICE WAS SOUGHT ACCORDING TO PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS*

Person from Whom Advice Sought	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Professional:			
No advice sought	85	72	89
County agent	2	8	0
National forest ranger	1	0	1
Soil conservationist	5	4	6
Two or more professionals	3	12	0
Non-professional:			
Neighbors, friends and others	4	4	4
Total	100	100	100

*Percents are rounded to the nearest whole number.

TABLE XXXII

PERCENTS OF ALL OWNERS, INNOVATORS AND NONINNOVATORS BY INTERVIEWER'S OPINION THAT THEY SHOULD OR SHOULD NOT PAY MORE ATTENTION TO WOODLAND MANAGEMENT

Amount of Attention Respondents Should Pay to Woodland Management	All Owners Percent (N = 100)	Innovators Percent (N = 25)	Noninnovators Percent (N = 75)
Should pay more attention	92	88	94
Uncertain	6	8	5
Should not pay more	2	4	1
Total	100	100	100

*Percents are rounded to the nearest whole number.

owners should not have paid "more attention to their woodlands" than they were doing at the time of the study.

CHAPTER III

SUMMARY

In 1962-1963, a selected sample of 100 Monroe County small woodland owners was asked for certain information in a personal interview to find what factors influenced them to adopt recommended woodland management practices. They also were asked why woodland owners, in general, did not carry out recommended forest management practices. The interviewer asked the owners why they liked their woodlands and why woodlands were not as valuable as they thought they should be.

The woodland owners were questioned about who they turned to for advice on woodland management practices. The interviewer also gave his opinion as to whether each owner should or should not pay more attention to the management of his woodland.

Other studies reviewed disclosed the following information concerning the adoption of recommended forestry practices of small woodland owners in general:

1. The small woodland owners felt that their fellow owners did not follow recommended practices because more rewarding activities claimed their time and money, it took too long to grow trees for needed income, some felt that they did not have the necessary technical knowledge, and many felt that the costs outweighed the benefits.

2. Foresters felt that the public must become more concerned regarding the value of small woodlands to overcome the widespread indifference of woodland owners to recommended forestry practices.

3. The low income of the small woodland owners is a major obstacle to good forestry practices. Usually such owners do not realize the income potential of their forest lands. The low income owner needs to have knowledge of recommended woodland management practices that he can carry out even with his limited resources.

4. There is a need for additional efforts by all agencies and businesses concerned through the use of practical demonstrations that would help small woodlands owners obtain necessary technical knowledge on recommended woodland management practices.

5. Most owners became interested in recommended woodland management practices through personal contacts with professionals who knew forestry. Farm owners can be reached through personnel of the forest products industry, such as timber and pulpwood buyers, loggers, operators of wood concentration yards, and small sawmill operators.

6. The educator who hopes to help small woodland owners to adopt recommended management practices needs to know how to integrate those practices into a well-organized, planned, and properly-executed program using the many resources available, such as established agricultural agencies, county or community planning committees, and private groups.

I. REVIEW OF FINDINGS

Some of the more important factors found in this study to influence the management practice adoption of Monroe County small woodland owners are listed below:

1. The average sized farm of all owners was 146.5 acres. The innovators owned an average of 208.4 acres per farm and noninnovators 125.8 acres per farm. Innovators had more average woodland acres (79.3) than noninnovators (57.9 acres).

2. Over one-half of all owners (56 percent) said that they liked their woodland because it furnished marketable timber. Fewer innovators (48 percent) gave this reason than did noninnovators (60 percent).

3. Most of the owners evidently felt that their woodland was of at least some value to them; however, 6 percent said that they received very "poor" production from their woodland. Five percent said that growth was "too slow" and another 5 percent said "other crops yield more income."

4. More than three-fourths (76 percent) of all owners selected "more rewarding activities claim time and money" as the main reason why small woodland owners generally do not adopt recommended forestry practices. Another reason mentioned by a large number of the owners (68 percent) was that it takes "such a long time to grow crops and get income."

5. A very high percent of all owners (85 percent) had not sought any advice on woodland management practices at all. More innovators (28 percent) had contacted someone for advice than noninnovators (11 percent). Eight percent of the innovators contacted the county agent for advice, while none of the noninnovators listed this source.

6. It was the interviewer's opinion that 92 percent of the owners should have been paying more attention to the management of their woodland.

II. IMPLICATIONS

The Agricultural Extension forestry program in Monroe County could be improved based on information from this study. The following are some factors that should be considered in planning and implementing an educational program on the use of recommended woodland management practices:

1. The average woodland owner interviewed liked his woodland because it produced marketable timber or income. His greatest "dislike" was "poor" production. They were also interested in getting assistance (e.g., market quotations). Therefore, it can be assumed that the majority would be interested in educational programs designed to improve the production and marketing of timber.

2. A special educational program should be developed to give the woodland owners the technical knowledge needed so they can manage their woodlands in such as way as to get optimum income.

3. Educational programs should be developed for separate innovator and noninnovator classes of farmers.

4. An effort should be made to involve the forestry innovators in the county as demonstration woodland farmers.

5. Programs need to be developed to help woodland owners to be aware of the professional advice available to them.

6. A county educational program for training and/or using of the personnel of wood using industries, professional foresters, and other people who know forestry, as leaders should help.

7. An educational effort should be made to help families with small woodlands become aware of, and interested in, forest production as a long-term family investment. A woodland plan could be developed just as a cropping plan including other enterprises is developed for their farm.

8. A county-wide forestry organization including owners interested in improved forestry, foresters, representatives of the wood using industries, and members of the agricultural agencies could help to publicize and make available professional assistance in the county for all woodland owners. Through promotional efforts the organization could also help other woodland owners to become more interested in using recommended forestry practices (see Appendix).

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APPENDIX

THE AGRICULTURAL EXTENSION SERVICE, UNIVERSITY OF TENNESSEE
Knoxville, Tennessee

TENNESSEE WOODLAND MANAGEMENT SURVEY

A or B
(Circle one)

INTRODUCTION: I am helping with a survey that is being made by the University of Tennessee. The purpose is to obtain information to use in planning programs helpful to woodland owners. The answers you give will be added to those given by other people who are being interviewed in this county and other parts of the state to get a complete picture of the forestry situation. Could I have a little of your time to go over these questions?

1. About how many acres do you have in your farm(s)? Cropland? Improved pasture (not woodland)? Total woodland? Woodland grazed? Woodland ungrazed? Other land?

   a. Total (b + c + d + e) land _____
   b. Cropland _____
   c. Improved pasture _____
   d. Total woodland _____
      (1) Grazed _____
      (2) Ungrazed _____
   e. Other land _____

   (Check to be sure items b, c, d and e add up to the TOTAL FARM ACREAGE in a.)

TO THE INTERVIEWER: If the respondent has fewer than five acres of total woodland, terminate the interview. If five acres or more of total woodland, check the appropriate category in item #2 below and continue the interview.

2. About how many acres of total woodland do you have?

   a. 5-9 _____ acres
   b. 10-19 _____
   c. 20-29 _____
   d. 30-49 _____
   e. 50-99 _____
   f. 100-249 _____
   g. 250-499 _____
   h. 500-2500 _____

3. As you see it, is your woodland of any benefit to you?
   a. Yes _____ b. Some _____ c. No _____

TO THE INTERVIEWER: If NO to question #3 above, skip to question #6. If SOME, ask questions 4 and 5. If YES, ask question #4. YES and SOME answers delete #6.

4. In what way <u>does</u> it benefit you? _____

5. In what way <u>doesn't</u> it benefit you as much as you would like? _____

6. Why do you think so? _____

7. We have listed on these cards some reasons why woodland owners do not adopt recommended woodland management practices. (Hand respondent the set of 12 cards.) Now here is what we would like you to do:

   a. Please look through all the cards; read each one; then pick out the four (4) cards that show why you believe woodland owners do not use better woodland management practices. After you have selected the four (4) cards, please hand me the rest.

   b. Now these four (4) reasons are not of the same importance; so please go through them and decide which one is probably of most importance. Please give me the number on the back of the card. Also, do this with each of the remaining three cards.

Rank	1	2	3	4
Card No.				

Are there any other reasons why you believe woodland owners do not adopt recommended woodland management practices?

TO THE INTERVIEWER: The purpose of this next question is to find out if the respondent--

1. is aware of certain recommended practices;

2. is interested in using them;

3. has tried them;

4. is still using them, or will use them when the need arises;

5. and his reasons for never trying the practices, or for not using them after trying them.

INTERVIEWER hand each card to respondent separately after saying: "I have here a set of cards. On each card is a woodland management practice. Would you read each card and tell whether you have tried that practice." (Check "Yes" or "No" in the "Has tried" column below.)

In his reply the respondent may also answer the other four points. If not, interviewer will ask appropriate questions to obtain the answers. Check in appropriate columns below.

8. Woodland practices	Has tried		Is using or Will use		Read or Heard of		Interested in	
	Yes (a)	No (b)	Yes (c)	No (d)	Yes (d)	No (f)	Yes (g)	No (h)
(1) Making an inventory or the salable timber in your woodland and its value								
i. Reasons _____								
(2) Having a plan for growing and selling timber and/or other forest products								
i. Reasons _____								
(3) Planting trees to reforest woodland								
i. Reasons _____								
(4) Preparing ground for natural seeding or planting								
i. Reasons _____								
(5) Establishing woodland on open land suited to trees								
i. Reasons _____								
(6) Thinning the woods								
i. Reasons _____								
(7) Killing undesirable trees								
i. Reasons _____								

	Has tried		Is using or Will use		Read or heard of		Interested in	
	Yes (a)	No (b)	Yes (c)	No (d)	Yes (e)	No (f)	Yes (g)	No (h)
(8) Pruning stand trees								
i. Reasons _____								
(9) Marking trees for selective cutting								
i. Reasons _____								
(10) Establishing a diameter limit for trees to be cut								
i. Reasons _____								
(11) Constructing fire lanes								
i. Reasons _____								
(12) Control grazing (fencing out livestock)								
i. Reasons _____								
(13) Controlling insects								
i. Reasons _____								
(14) Controlling disease outbreaks								
i. Reasons _____								
(15) Shopping around for best price for selling trees								
i. Reasons _____								
(16) Using a written contract in selling trees								
i. Reasons _____								

	Has tried		Is using or Will use		Read or heard of		Interested in	
	Yes (a)	No (b)	Yes (c)	No (d)	Yes (e)	No (f)	Yes (g)	No (h)
(17) Starting to harvest trees within a year after marking								
(18) Selling trees to obtain optimum (best) returns								
(19) Participating in ASC or other government forestry programs								
(20) Participating in non-government forestry programs (local forestry development associations, industrial groups, civic organizations, banks, and other business groups, individuals and others)								
(21) Getting the advice of professional foresters								

(17) i. Reasons _____

ii. Number of months after marking when harvest of trees started _____(months)
(To be completed for those who have tried this practice)

(18) i. Reasons _____

(19) i. Reasons _____

(20) i. Reasons _____

(21) i. Reasons _____

9. Are you acquainted with the ASC program to share the cost of woods improvement and tree planting?

a. Yes _____ b. No _____

10. Under the ASC program you can receive payment for certain woodland practices, if you are qualified, and by following certain requirements. Which of the three following practices have you used under the ASC program, read or heard about before today.

TO THE INTERVIEWER: Read each practice in the list below, and check whether or not respondent has used the practice under the ASC program and received payment for using it. Also, check whether or not respondent has read or heard about the practice before today.

	USED PRACTICE UNDER ASC PROGRAM		READ OR HEARD ABOUT BEFORE TODAY	
	Yes (1)	No (2)	Yes (3)	No (4)
a. Thinning out trees (part of B-10 practice)				
b. Killing undesirable trees (part of B-10 practice)				
c. Planting seedling trees (A-7 practice)				

11. During the past year, have you talked with anyone about the management of your woodland?

a. Yes_____ b. No _____

TO THE INTERVIEWER: If NO, skip to question #13. If YES, ask question #12 first.

12. With whom have you talked? (Check one or more of the following. If respondent gives names, write them at the side and check list later.)

a. Neighbor or friend _____

b. County agent _____

c. Extension forester _____

d. Other technical foresters:

(1) service forester_____
(2) consulting forester____
(3) industrial forester____

e. Sawmill operator _____

f. Timber buyer _____

g. Soil conservationist _____

h. ASC Committeeman _____

i. Vo-Ag teacher _____

j. National forest ranger_____

k. Banker _____

l. Other (specify) _____

13. Major occupation of respondent

a. Full-time farmer _____ e. Wage earner _____

b. Part-time farmer _____ f. Housewife or widow _____

c. Business (specify) _____ g. Retired _____

d. Professional (specify) _____ h. Other (specify) _____

14. What is your major farm enterprise?

a. Forestry _____ h. Fruits _____

b. Dairy _____ i. Vegetables _____

c. Beef _____ j. Potatoes _____

d. Hogs _____ k. Cotton _____

e. Poultry _____ l. General farm _____

f. Other livestock _____ m. Tobacco _____

g. Grains _____ n. Other (specify) _____

o. Nonfarmer _____

15. Would you please complete this sentence? (Hand respondent the card)

"The thing I <u>like</u> most about my woodland is _____

_____

TO THE INTERVIEWER: If respondent mentions more than one thing, write down all of them, and ask him, "Which is <u>most</u> important?" Then underscore it.

16. Would you please complete this sentence? (Hand respondent the card)
"The thing I <u>dislike</u> most about my woodland is _____

_____

TO THE INTERVIEWER: If respondent mentions more than one thing, write down all of them, and ask him, "Which do you dislike <u>most</u>?" Then underscore it.

17. Distance--residence to woodland (check one or more appropriate categories, but only once per category)

a. Live on place _____ c. 10-29 miles _____

b. Less than 10 miles _____ d. 30-99 miles _____

e. 100 miles or more _____

18. What was the highest grade level that you completed? (circle one)

0 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4
None Grade School H.S. Col. Undergrad.

Bachelor's degree Master's degree Doctor's degree

19. Age of respondent

a. Under 30 _____ c. 40-49 _____

b. 30-39 _____ d. 50-59 _____

e. 60 or more _____

20. What plans do you have for the future management of your woodland? (including what use will be made of timber and how you plan to manage your woodland so that there may be the kinds and amounts of timber you may want to have)

_____

21. (If respondent says he has no plans in question #20 above, ask why.)

_____

STATEMENT FOR INTERVIEWER: Now, Mr. _____, the next three questions are about whether you would be interested in any arrangements for having someone help manage your woodland for you under terms satisfactory for you.

22. Would you be interested in making private arrangements with a forester or company to help manage your woodlands under good forestry practices for a contracted period of years under terms satisfactory to you?

a. Not interested _____ b. Might be interested _____

c. Interested _____ d. If not interested, ask why _____

23. Would you be interested in joining other owners in this area in an association which would hire a private forester to help manage your woodland under terms satisfactory to you?

a. Not interested _____; b. Might be interested _____

c. Interested _____; d. If not interested, ask why _____

24. Would you be interested in joining other owners in this area in securing the services of a forester in some other way to help manage your woodland under terms satisfactory to you?

a. Not interested ___; b. Might be interested ___; c. Interested___;

d. If interested in securing the services of a forester in some other way, state how _____

25. Which of these three would you prefer?

a. Private arrangements with a forester or company. (Question #22)

_____

b. Joining an association hiring a private forester. (Question #23)

_____

c. Securing the services of a forester in some other way.

(Question #24) _____

d. None of them _____

26. Do you need market information on prices of timber and other forest products similar to that available for other farm crops and livestock?

a. Very interested _____ c. Indifferent _____

b. Somewhat interested ___ d. Not interested _____

27. Where can you get market information on prices of timber and other forest products?

a. _____

b. _____

c. Don't know _____

28. Do you need information on how much it costs per acre and how long it takes to produce timber to help you in your future woodland planning?

a. Very interested _____ c. Indifferent _____

b. Somewhat interested _____ d. Not interested _____

29. Where can you get information about how much it costs per acre and how long it takes to produce timber?

a. _____

b. _____

c. Don't know _____

30. Have you sold any timber from your woodland in the last five years?

a. Yes _____ b. No _____

TO THE INTERVIEWER: If the answer to question #30 above was NO, skip to question #35. If the answer to question #30 was YES, ask questions 31, 32, 33 and 34.

31. What year was the most recent one when you sold timber? 19___
(Year)

32. About how much did you get for your timber that year?

a. Less than $250 _____ c. 500-999 _____

b. 250-499 _____ d. 1000 and over _____

33. About how much timber did you sell that year? _____ (Circle one or more: acres; boardfeet; cord and other)

34. How did you arrive at the price per unit you got for your timber that year? _____

35. About how often has timber been sold from your woodland in past years?

a. At intervals of less than 5 years _____

b. At 5 to 10 year intervals _____

c. At 10 to 20 year intervals _____

d. At intervals of more than 20 years _____

36. (OPTIONAL) Approximately what was your total (gross) family income last year? (Hand card to respondent and ask him to select a category)

a. 0-1,999 _____
b. 2,000-3,999 _____
c. 4,000-5,999 _____
d. 6,000-7,999 _____
e. 8,000-9,999 _____
f. 10,000-11,999 _____
g. 12,000-13,999 _____
h. 14,000-15,999 _____
i. 16,000-17,999 _____
j. 18,000-19,999 _____
k. 20,000-21,999 _____
l. 22,000-23,999 _____
m. 24,000-25,999 _____
n. 26,000-29,999 _____
o. 30,000-49,999 _____
p. 50,000-99,999 _____

37. How would you rate the present condition and value of your woodland?

a. Excellent _____
b. Good _____
c. Fair _____
d. Poor _____

Name of respondent _____

Address _____ County _____ Number _____

Name of interviewer _____

Date _____

QUESTIONS FOR THE INTERVIEWER TO ANSWER:

38. All people do not adopt new practices at the same time. About where would you place the respondent with respect to adopting new recommended woodland practices?

a. Among the first few _____
b. Soon after the first few _____
c. Sooner than the average ___
d. A little later than most owners _____
e. Among the last few _____

39. Is the respondent

a. Man _____
b. Woman _____

40. Interest of respondent in improving his woodland (in interviewer's judgment)

a. Very interested _____
b. Somewhat interested ____
c. Indifferent _____
d. Not interested _____

41. Respondent's attitude toward survey (in interviewer's judgment)

a. Friendly _____
b. Somewhat friendly _____
c. Indifferent _____
d. Antagonistic _____

42. Should the respondent pay more attention to the management of his woodland in light of his situation?

a. Yes _____ b. No _____ c. Uncertain ____

43. How well do you know the respondent?

a. Very well _____ c. Not very well _____

b. Fairly well _____ d. Not at all _____

44. How familiar are you with the respondent's woodland situation?

a. Very familiar _____ c. Not very familiar _____

b. Fairly familiar _____ d. Not familiar _____

45. If very or fairly familiar with their woodland situation, how would rate the present condition and value of his woodland?

a. Excellent _____ c. Fair _____

b. Good _____ d. Poor _____

A FARM FORESTRY PROGRAM FOR MONROE COUNTY, TENNESSEE

This project statement provides a guide to initiating an active farm woodland management program in Monroe County, Tennessee. It has been developed by county agricultural representatives and foresters of the Extension Service, Soil Conservation Service, State Forestry Service, Agricultural Stabilization Service, Monroe Soil Conservation District, Tennessee Valley Authority, Vocational Agricultural Departments, Farmers Home Administration, and U. S. Forestry Service assisting the Monroe Forestry Association. Criteria, developed from studies made concerning need for adjusting land use to timber production for soil and water conservation and from favorable income estimates from timber production, are used as a basis for determining possibility for success of a forestry program. Because of public interest in the small woodland situation as evidence by the forming of the Monroe Forestry Association, all agencies have informally agreed to unify their efforts through their regular channels to promote setting of trees where needed and better management of existing woodlands in Monroe County.

Objectives

The ultimate objective is to obtain maximum and sustained forest production (about 300 board feet or one cord per acre per year) on 150,000 acres of present woodland or land to be set to trees owned by farmers and individuals in Monroe County. The immediate objective is to expand and intensify educational and field services of all interested groups and agencies in providing on-the-ground assistance

that will bring about the conversion of large acreages of eroded and low producing land to timber production, also the beginning of a timber stand improvement and recommended management program on existing timber, both of which will greatly increase income of land involved.

Background

Approximately 110,000 acres, or 50 percent of the total area of the county excluding U. S. forest lands, is presently wooded. The woodland has provided a source of income to many people and has supported several lumber companies and sawmill operations for many years, however, the hardwood timber has been heavily cut over without recommended management for future production. In recent years a nearby pulpwood market has given favorable employment to many people in harvesting mainly unmanaged Virginia pine stands. The county has one large area (approximately 85,000 acres) of once good timber and crop land which is presently severely eroded in many areas giving little production returns. There is need for reforestration on most of this area. After considering the need for greater income, present nearby markets for cord, pole, and saw timber, and the need to adjust eroded land to timber for soil and water conservation the following estimates were made: There are 18,000 acres of active eroded land in need of immediate setting of timber; 17,500 acres that need to be adjusted from crop to woodland and 18,000 acres of woodland in need of reforestation. This gives a total of 53,500 acres, or 35 percent, of our privately owned land that need reforestation. This brings about the need for an intensive educational and technical program to provide information and services to land owners in making this needed adjustment.

County-wide fire protection was organized in 1958. The annual loss from fire was reduced from 4,000 acres in the early 1950's to 137 acres in 1959. Forestry goals, organization, and agency responsibility are given below.

Forestry Goals

The following goals were established by the Monroe Forestry Association.

	1962-63	1963-64	1964-65
1. Tree planting (acres)	6,000	10,000	15,000
2. Timber stand improvement (acres)	12,000	20,000	30,000

3. Managed harvesting - to assist in managed harvesting and marketing of timber.

4. Fire control - to continue to hold the annual fire loss to less than 500 acres annually.

Agreements

A statement will be included from each cooperating agency, organization, and business. Special note: Additional pages will be added here for the agreements from those listed below:

The Tennessee Agricultural Extension Service agrees to: _____

_____

The Monroe Soil Conservation District agrees to: _____

_____

The Tennessee State Forestry Service agrees to: _____

_____

The Soil Conservation Service agrees to: _____

_____

The Tennessee Valley Authority agrees to: _____

_____

The Agricultural Stabilization Committee agrees to: _____

_____

The Hiwassee Land Company agrees to: _____

_____

The United States Forestry Service agrees to: _____

_____

The Vocational Agricultural Departments agree to: _____

_____

The Southern Timber Management Services agrees to: _____

_____

Charles R. Paige, Jr., Timber Management Consultant, agrees to: _____

_____

Any others: _____

Work Plan

The program will involve the facilities of all county agricultural, forestry agencies and Monroe Soil Conservation District in addition to that of forest industry and consultant foresters in the immediate area. Primary responsibility for conducting the program will be the Monroe Forestry Association. The program will provide follow-up contacts to insure continuity of work and landowner interest. District personnel of the above, as well as, personnel of other agricultural and forestry organizations within the county or surrounding area will, upon request of the above, provide advisory service, make field inspections, make

individual plans for forestry development, and provide on-the-ground assistance in applying stand improvement technique.

To facilitate timber stand improvement, certain equipment and chemicals should be readily available at reasonable cost. Equipment needs will be as follows:

1. Tree injector (5)
2. Planting bars (15)
3. Mechanical tree planter (1)
4. Tree marking equipment (5) — To be available to Association
5. Tree marking paint

Some of the chemicals needed for stand improvement are:

(to be stocked for purchase from Farm Supply Store)

1. Ammate
2. Growth regulators (2, 4-D; 2,4, 5-T; 2, 4, 5-TP)

Chemicals needed for control of insects and diseases are:

1. Aldrin - emulsion dip to control Pales Weavil and Tip Moth
2. Benzene Haxachloride - spray to kill Ips Beetle

CONSTITUTION AND BY-LAWS

OF THE

MONROE FORESTRY ASSOCIATION

Article I - Principal Office

This Association shall have its principal office located to coincide with the post office address of the President, or such other place as the President may direct.

Article II - General Purposes

To promulgate the planting, production, and marketing of timber in Monroe County on all lands where needed.

Specific Objectives

1. To bring about the conversion of eroded and low productive land to timber production.
2. To increase the income of land owners in Monroe County by converting eroded and low productive land to timber.
3. To provide an intensive educational program to create wide-spread interest in forestry management.
4. To provide for and coordinate technical assistance necessary for on-the-site help in planning, marketing, etc. as needed to carry out a well managed forestry program.
5. To provide an organization for public relations concerning the forestry program.
6. To provide an association whereby people of the county can act together on matters of mutual interest to promote better forestry management.
7. To assist in every way possible the protection of all timber from fire, insects, and diseases.
8. To provide a work plan for a farm forestry program.

Article III - Membership

Eligibility

Section I. All landowners interested in farm woodland management are eligible for membership in this association upon payment of $1.00 dues per year.

Section II. All other individual residents interested in improving forestry program in Monroe County are eligible for membership upon payment of $1.00 per year.

Section III. Supporting organizations or industries may become members upon payment of $25.00 per year for dues.

Application and Payment of Dues

Section I. Individuals desiring membership may pay dues to and be registered by an official of the association.

Section II. Annual dues shall be paid January 1.

Article IV - Officers and Directors

Section I. Officers of the association shall be - President; Vice-President; Secretary; and Treasurer; and four directors, (one from each major division of County), all of whom shall be elected at the November meeting. At first election of directors, two shall be elected for one year, two for two years. Thereafter two shall be elected each November for a term of two years.

Article V - Duties of Officers

Section I. President shall be responsible for calling all meetings and to preside at all meetings of the association. President shall appoint all committees.

Section II. Vice-President shall assume all duties of President in the absence of President.

Section III. Secretary shall keep records of the association and handle correspondence.

Section IV. Treasurer shall receive all collection of money coming into hands of association, keep records of receipts, expenses, and make payment of bills on authority of board of directors. Make financial report to association at each meeting.

Section V. Directors - The government and management of the association shall be vested in board of directors. Other officers of the association shall be ex-officio members of the board of directors. A majority of directors shall constitute a quorum.

Article VI - Meetings

Section I. Bi-Monthly meetings of the association shall be held on the third Thursday of the month beginning with September. The annual meeting being the third Thursday of January.

Section II. Special meetings may be called by President at any time and/or shall be called by him on the written request of five members; such special meetings, being confined to the purpose for which called.

Article VII - Amendments

Section I. Amendments to constitution and by-laws may be made by a majority vote of members present at any meeting following a thirty day written notice of proposed amendment to membership.

Article VIII - Election

Section I. President shall appoint a nominating committee for each annual election at the September meetings whose duty it shall be to report a list of nominees for all officers of the association. Additional nominations may be made from the floor.

VITA

BORN: April 10, 1921 to Carey F. and Helen Stamey, a son, Ray C. Stamey at Sevier County, Tennessee.

ELEMENTARY AND HIGH SCHOOL EDUCATION: Attended Pittman Center Elementary and High School at Route 9, Sevierville, Tennessee.

UNDERGRADUATE STUDY: Attended four years at the University of Tennessee. Granted a B.S. degree in Agriculture with a major in Agricultural Education from The University of Tennessee, Knoxville, Tennessee, in 1947.

GRADUATE STUDY: Attended The University of Tennessee, Knoxville, Tennessee.

EXPERIENCE: The University of Tennessee Ag Club, Alpha Zeta, Navigator with U.S. Air Force, taught vocational agriculture nine years, County Agricultural Agent 14 years, and District Supervisor Agricultural Extension Service.